YEAR 2035 REGIONAL LAND USE AND TRANSPORTATION SYSTEM PLANS FOR SOUTHEASTERN WISCONSIN

NEWSLETTER 5 APRIL 2007

INTRODUCTION

New design year 2035 regional land use and transportation plans for the seven-county Southeastern Wisconsin Region have been completed and adopted by the Southeastern Wisconsin Regional Planning Commission (SEWRPC). The year 2035 regional land use and transportation plans were developed under the guidance of the Advisory Committee on Regional Land Use Planning and the Advisory Committee on Regional Transportation Planning, respectively. These Advisory Committees included representatives of the seven counties and 147 municipalities of the Region, representatives from the Wisconsin Departments of Transportation and Natural Resources, and representatives from the U.S. Department of Transportation and the U.S. Environmental Protection Agency. The Advisory Committees were responsible for proposing to the Commission, after careful study and evaluation, a recommended regional land use plan and a recommended regional transportation system plan. The Advisory Committee structure was intended to promote intergovernmental and interagency coordination, and to serve as direct liaisons between the Commission planning effort and the local and State governments that will be responsible for implementing the recommended plans. Advisory Committee meeting agendas and minutes, as well as the five study newsletters, and electronic copies of the year 2035 regional land use and transportation plans are all available on the Commission's website at www.sewrpc.org/regionalplans.

The design year 2035 regional land use and transportation system plans represent the fifth effort of this type by the Commission. The process for the review, update, and extension of the regional land use and transportation plans began by considering forecast growth of the Region to the year 2035 in terms of employment, population and households. Trends in land use development, travel, and transportation system development were reviewed, as well as reviewing the implementation to date of the previous regional land use and transportation plans. A guiding vision, principles, and objectives for land use and transportation in the Region were then defined. Land use pattern alternatives were considered and a preliminary recommended year 2035 regional land use plan was developed. Regional transportation plan alternatives were then prepared and evaluated, and a preliminary recommended year 2035 regional transportation plan was proposed. Public comment on the preliminary recommended plans was considered and final year 2035 regional land use and transportation plans were recommended. Throughout the process, extensive efforts were made to inform, and obtain input from the public to shape plan alternatives, and the preliminary and final recommended plans. These efforts included four series of public meeting and hearings throughout southeastern Wisconsin; a series of newsletters and summary brochures prepared throughout the study process, this being the fifth and final newsletter in that series; the Commission website, www.sewrpc.org, containing comprehensive information regarding the study, including notifications of meetings, draft plan materials, and Advisory Committee rosters, agendas, and minutes. The website also provided the opportunity to submit comments on the plans. The Commission staff also provided briefings and presentations, and conducted outreach to provide information about, and obtain input on, the regional plans and the planning process to minority and low-income populations, business and industry groups, freight transportation interests, and Federal and State environmental resource agencies.

This fifth newsletter includes information regarding:

- Year 2035 population, household, and employment projections;
- The final recommended regional land use plan for the year 2035; and ,
- The final recommended regional transportation plan for the year 2035.

YEAR 2035 POPULATION, HOUSEHOLD, AND EMPLOYMENT PROJECTIONS

In any planning effort, forecasts are required of those future events and conditions which are outside the scope of the plan but will affect plan design and implementation. In the preparation of the regional land use plan, the future demand for land which the plan must seek to accommodate depends primarily upon future population, household, and employment levels. As has been done in the past, the Commission projected a range of future year 2035 population, household, and employment – high, intermediate, and low for the Region. This approach recognizes the uncertainty that surrounds any effort to predict future socioeconomic conditions. The intermediate projection is considered the most likely to be achieved for the Region overall, and constitutes the Commission's forecast.

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Figure 1 shows actual and projected population, households, and employment in the Southeastern Wisconsin Region between the years 1950 and 2035. The number of jobs in the Region is forecast to increase by about 12 percent by the year 2035. The strength of the regional economy is not projected to significantly increase or decrease relative to the State or Nation. The overall labor force in the Region is expected to level-off, particularly as the baby-boom generation reaches retirement age, moderating the number of jobs able to be accommodated. Also projected is the continuing shift in the Region from a manufacturing to a service-based economy. The population in the Region is forecast to increase by about 18 percent by the year 2035. This forecast envisions a modest increase in fertility and survival rates in the Region, as well as anticipates minimal net migration for the Region overall through the year 2035. With baby-boomers aging, 20 percent of the Region's population is projected to be 65 years of age or older by the year 2035 as compared to 13 percent in the year 2000. The number of households in the Region is forecast to increase by about 24 percent by the year 2035. The average household size in the Region is expected to continue to decrease, but more moderately – from 2.52 persons per household in the year 2000 to 2.39 persons per household in the year 2035.

FINAL RECOMMENDED YEAR 2035 REGIONAL LAND USE PLAN

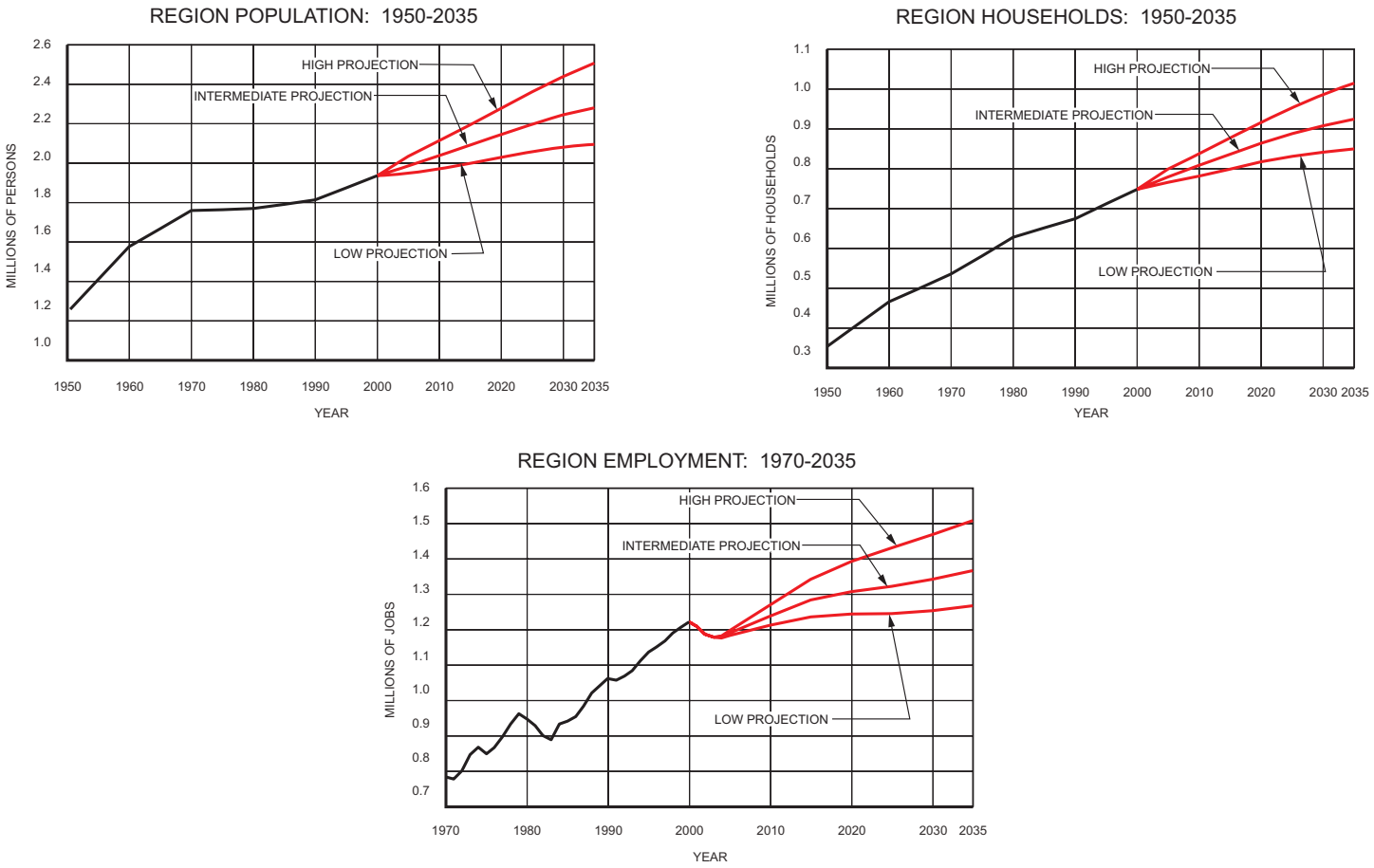
The final recommended regional land use plan is intended to provide a guide, or overall framework, for future land use development within the Region to the year 2035. Implementation of the plan will depend upon the voluntary actions of local, county, State, and Federal agencies and units of government in conjunction with the private sector.

The year 2035 regional land use plan, contains the following recommendations:

- The primary environmental corridors, secondary environmental corridors, and isolated natural resource areas of the Region should be preserved in essentially natural, open uses, continuing to account for about 23 percent of the area of the Region, as shown on Map 1. These areas encompass the best remaining features of the Region's natural landscape—lakes, rivers, streams,

Figure 1

ACTUAL AND PROJECTED POPULATION, HOUSEHOLDS, AND EMPLOYMENT IN THE SOUTHEASTERN WISCONSIN REGION: 1950-2035



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

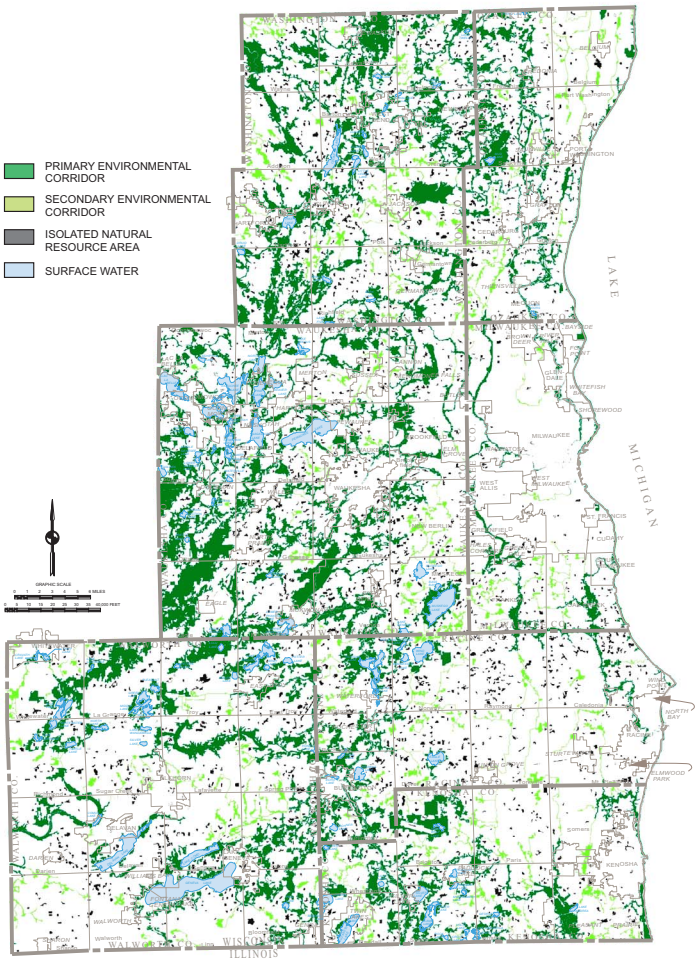
and associated shorelands and floodlands, wetlands, woodlands, prairie remnants, wildlife habitat, rugged terrain and steep slopes, unique landforms and geological formations, existing and potential outdoor recreation sites, and scenic areas and vistas.

- The prime, or most productive farmland in the Region should be preserved. The farmland with soils considered to be most suitable for agriculture is farmland covered by agricultural capability Class I and Class II soils as classified by the U.S. Natural Resources Conservation Service. As shown on Map 2, farmland with Class I and Class II soils accounted for about 36 percent of the land area in the Region and 75 percent of all farmland in southeastern Wisconsin in the year 2000. Some Class I and Class II farmland that is located adjacent to existing urban centers and within planned urban growth/sanitary sewer service areas is necessarily proposed to be converted to urban use as a result of planned and orderly growth of those urban centers. It is recommended that the counties in the Region, in cooperation with the concerned local units of government, carry out planning programs to identify and preserve prime farmland, considering farmland covered by Class I and Class II soils, and other factors including the size of individual farm units and overall size of the farming area, the availability of agricultural services, and the degree of encroachment from urban uses. Most county planning in this regard was carried out more than 20 years ago, and needs to be reviewed and updated.

- New urban development should be accommodated within and around existing urban centers as infill development, through redevelopment, and through the orderly expansion of planned urban service areas on lands proximate to these centers. Map 3 shows these urban centers and growth areas. Particular emphasis is placed on stabilizing and revitalizing the central cities of Milwaukee, Racine, and Kenosha. The plan further proposes that the forecast increment in population and residential land be allocated to these urban centers and their planned urban growth/sanitary sewer service areas predominantly at medium and high densities—88 percent of all new housing units—in residential neighborhoods and in more mixed use settings. The plan envisions residential neighborhoods designed as cohesive units, properly related to the larger community of which they are a

Map 1

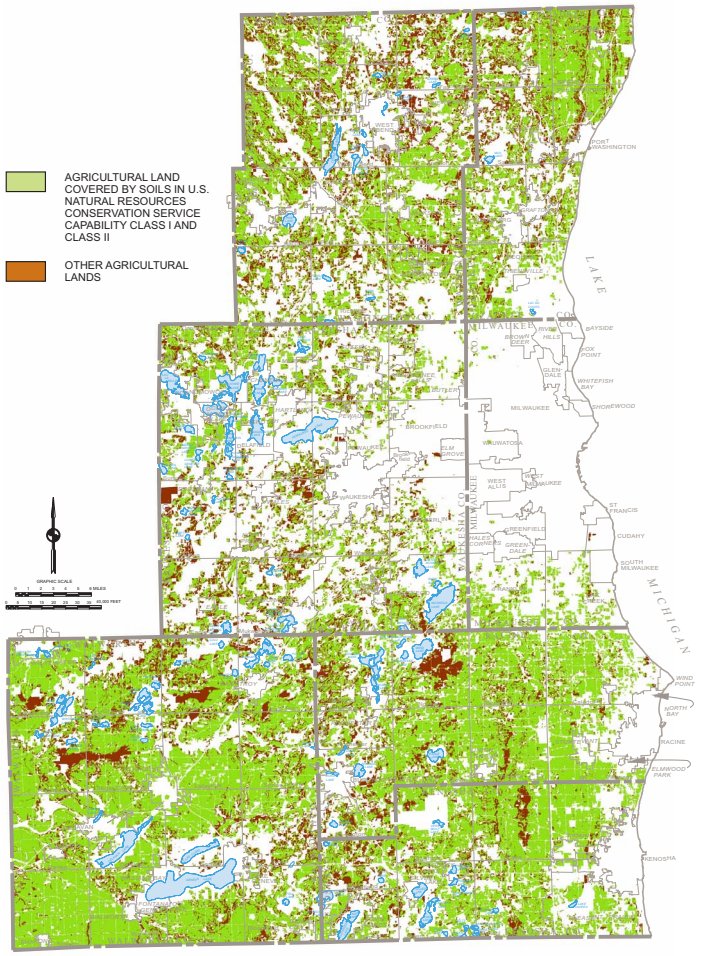
PLANNED ENVIRONMENTAL CORRIDORS AND ISOLATED NATURAL RESOURCE AREAS IN THE REGION



Source: SEWRPC.

Map 2

AGRICULTURAL LANDS IN THE REGION: 2000



Source: SEWRPC.

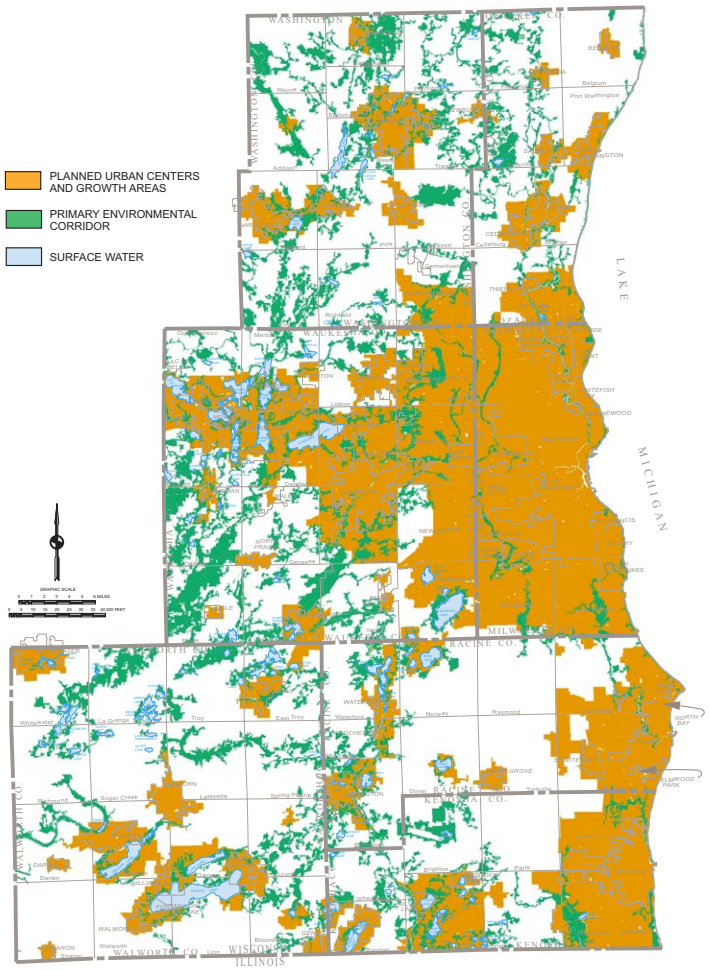
part, and served by an interconnected internal street, bicycle-way, and pedestrian system and by a neighborhood school, park, and shopping area. The regional plan also envisions residential development in mixed-use settings including dwellings above the ground floor of commercial uses; residential structures intermixed with, or located adjacent to, compatible commercial, institutional, or civic uses; and residential development integrated into, or located in proximity to, major employment and activity centers.

- The regional plan envisions a range of commercial and industrial areas. The largest commercial and industrial areas, in terms of employment levels, are identified as major economic activity centers. These are defined as areas containing a concentration of commercial and/or industrial land having at least 3,500 total jobs or 2,000 retail jobs. Sixty such centers would accommodate about 50 percent of all jobs in the Region in 2035. The plan envisions the continued development and redevelopment of the Region's existing major commercial and industrial centers, and those now under development or redevelopment, as shown on Map 4.

- Development outside urban centers and their proposed urban service areas would be constrained. About 2 percent of the projected increment in households in the Region between 2000 and 2035, or about 3,700 households, would be accommodated at rural density (no more than one housing unit per five acres) in such areas, with conservation subdivision designs recommended. The only other residential development outside urban centers and their planned urban service areas would be limited to that which was already committed through approved subdivision plats and certified survey maps.

Map 3

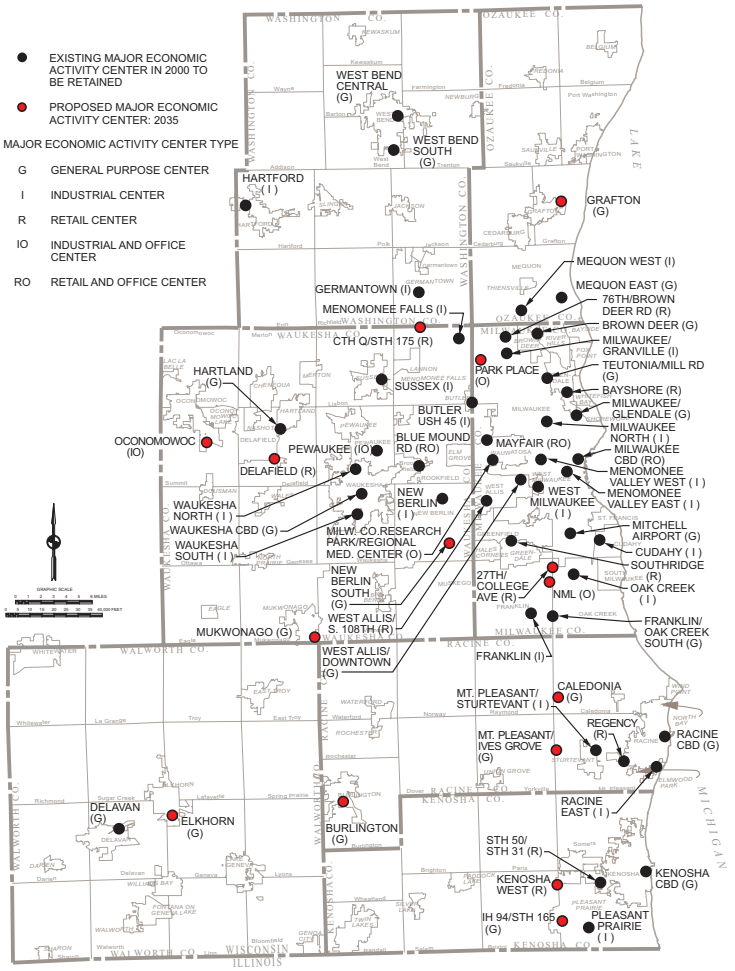
PROPOSED URBAN CENTERS IN THE FINAL RECOMMENDED REGIONAL LAND USE PLAN: YEAR 2035



Source: SEWRPC.

Map 4

PROPOSED MAJOR ECONOMIC ACTIVITY CENTERS IN THE FINAL RECOMMENDED REGIONAL LAND USE PLAN: YEAR 2035



Source: SEWRPC.

FINAL RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN

The development of the final recommended year 2035 regional transportation system plan for southeastern Wisconsin was guided by the following vision for the transportation system of southeastern Wisconsin:

A multimodal transportation system with high quality public transit, bicycle and pedestrian, and arterial street and highway elements which add to the quality of life of Region residents and support and promote expansion of the Region's economy, by providing for convenient, efficient, and safe travel by each mode, while protecting the quality of the Region's natural environment, minimizing disruption of both the natural and manmade environment, and serving to support implementation of the regional land use plan, while minimizing the capital and annual operating costs of the transportation system.

The development of each plan element of the recommended regional transportation system plan for the year 2035—public transit, bicycle and pedestrian, travel demand management, transportation system management, and arterial streets and highways—builds upon the current adopted year 2020 regional transportation plan, recognizing the successful implementation of approximately 15 to 20 percent of each element of the year 2020 plan since 1997.

The recommended year 2035 regional transportation system plan is designed to serve, and to be consistent with, the year 2035 regional land use plan. Future needs for public transit, street and highway, and other transportation improvements considered in the regional transportation planning process was derived from the projected travel based upon the regional land use plan. In addition, the

consistency of the regional transportation and land use plans was evaluated by comparing the accessibility provided under the recommended transportation plan and the location of improvements proposed under the recommended transportation plan to the location of land use development and redevelopment proposed under the land use plan.

The process for the development of the recommended year 2035 regional transportation plan began with consideration and development of the travel demand management, transportation systems management, bicycle and pedestrian, and public transit elements of the plan. Arterial street and highway improvement and expansion was then considered only to address the residual highway traffic volumes and attendant traffic congestion which may not be expected to be alleviated by travel demand management, transportation systems management, bicycle and pedestrian facilities, and public transit.

Discussed in the remainder of this newsletter are the public transit, bicycle and pedestrian facilities, transportation systems management, travel demand management, and arterial street and highway elements of the final recommended year 2035 regional transportation plan.

Public Transit Element

The public transit element of the recommended plan envisions significant improvement and expansion of public transit in southeastern Wisconsin, including development within the Region of a rapid transit and express transit system, improvement of existing local bus service, and the integration of local bus service with the recommended rapid and express transit services. Map 5 displays the transit system proposals for each of the three transit system components. Altogether, service on the regional transit system would be increased from service levels existing in 2005 by about 100 percent measured in terms of revenue transit vehicle-miles of service provided, from about 69,000 vehicle-miles of service on an average weekday in the year 2005 to 138,000 vehicle-miles of service in the year 2035 (see Table 1).

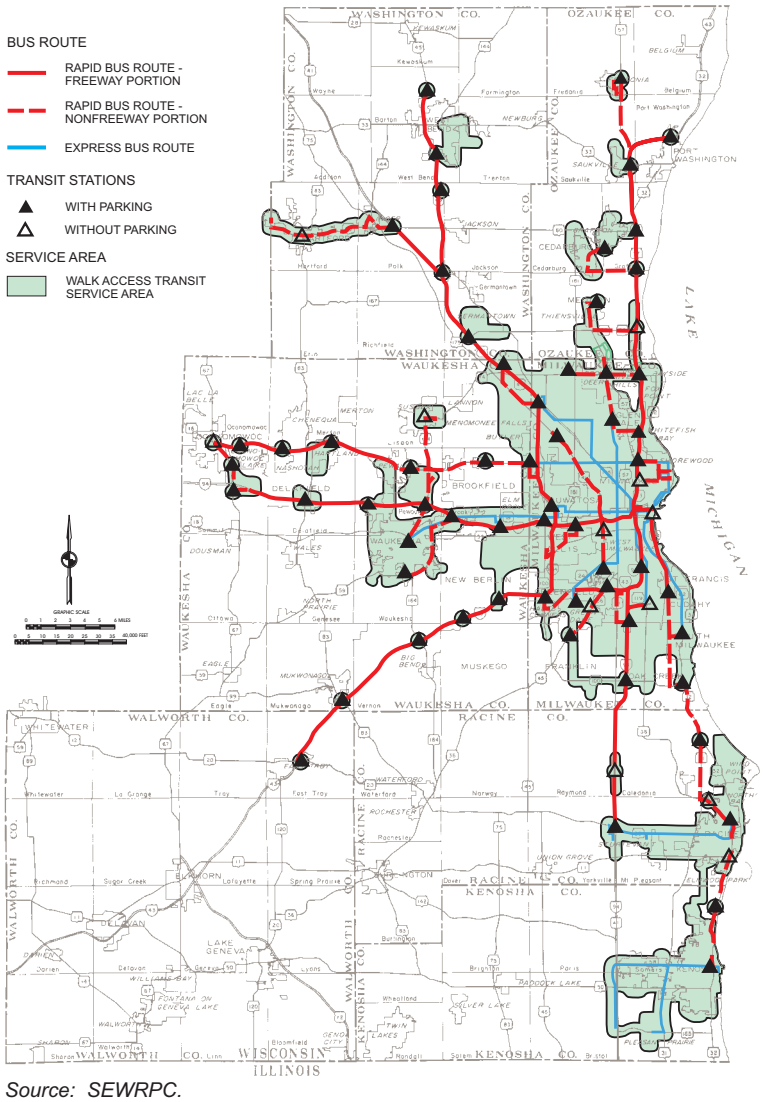
The recommended expansion of public transit is essential in southeastern Wisconsin for many reasons:

- Public transit is essential to provide an alternative mode of travel in heavily traveled corridors within and between the Region's urban areas, and in the Region's densely developed urban communities and activity centers. It is not desirable, and not possible, in the most heavily traveled corridors, dense urban areas, or the largest and densest activity centers of the Region to accommodate all travel by automobile with respect to both demand for street traffic carrying capacity and parking. To attract travel to public transit, service must be available throughout the day and evening at convenient service frequencies, and at competitive and attractive travel speeds.

- Public transit also supports and encourages higher development density and infill land use development and redevelopment, which results in efficiencies for the overall transportation system and other public infrastructure and services.

Map 5

PUBLIC TRANSIT ELEMENT OF THE RECOMMENDED REGIONAL TRANSPORTATION SYSTEM PLAN: YEAR 2035



Source: SEWRPC.

Table 1

PUBLIC TRANSIT ELEMENT OF THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN

Average Weekday Transit Service Characteristics	Existing 2005[a]	Proposed 2035	Proposed Increment	
			Number	Percent Change
Revenue Vehicle - Miles				
Rapid	7,900[b]	24,000	16,100	203.8
Express	- -	17,000	17,000	- -
Local	61,100	97,000	35,900	58.8
Total	69,000	138,000	69,000	100.0
Revenue Vehicle - Hours				
Rapid	350[b]	1,100	750	214.3
Express	- -	1,100	1,100	- -
Local	4,750	8,900	4,150	87.4
Total	5,100	11,100	6,000	117.6

[a] *Estimated.*

[b] *Includes the existing commuter bus route operated in the Kenosha-Milwaukee-Racine corridor. While portions of this route operate with express stop spacing, the long trips served by, and average operating speeds of, this route are typical of those for rapid service.*

Source: SEWRPC.

- Public transit also contributes to efficiency in the transportation system, including reduced air pollution and energy consumption.
- Public transit permits choice in transportation, enhancing the Region's quality of life and economy. A portion of the Region's population and businesses would prefer to have public transit alternatives available and to travel by public transit. High quality public transit helps provide a high quality of life and contributes to the maintenance and enhancement of the Region's economy.
- Public transit is essential in the Region to meet the travel needs of persons unable to use personal automobile transportation. In the year 2000, approximately 80,000 households, or 11 percent of the Region's households, did not have a personal vehicle available and were dependent upon public transit for travel. The accessibility of this portion of the Region's population to the metropolitan area—jobs, health care, shopping and education—is almost entirely dependent upon the extent to which public transit is available, and is reasonably fast, convenient, and affordable.

Rapid Transit Service

The recommended rapid transit service would consist of buses operating over freeways connecting the Milwaukee central business district, the urbanized areas of the Region, and the urban centers and outlying counties of the Region. Rapid transit bus service would be provided south to Racine and Kenosha, southwest to Mukwonago and East Troy, west to Waukesha and Oconomowoc, northwest to West Bend and Hartford, and north to Cedarburg, Grafton, Saukville, and Port Washington. The proposed rapid transit system would have the following characteristics:

- The bus rapid transit service would operate in both directions during all time periods of the day and evening providing both traditional commuter and reverse-commute service.
- The rapid transit service would operate with some intermediate stops spaced about three to five miles apart to increase accessibility to employment centers and to increase accessibility for reverse-commute travel from residential areas within central Milwaukee County. The stops would provide connections with express transit service, local transit service, or shuttle bus or van service to nearby employment centers.
- The service would operate throughout the day. The frequency of service provided would be every 10 to 30 minutes in weekday peak travel periods, and every 30 to 60 minutes in weekday off-peak periods and on weekends.

An approximately 204 percent increase in rapid transit service is recommended as measured by daily vehicle-miles of bus service, from the 7,900 vehicle-miles of such service provided on an average weekday in the year 2005, to 24,000 vehicle-miles in the plan design year 2035.

Express Transit Service

The recommended express transit service would consist of a grid of limited-stop, higher-speed routes located largely within Milwaukee County connecting major employment centers and shopping areas, other major activity centers such as General Mitchell International Airport, tourist attractions and entertainment centers, and residential areas. The express routes would replace existing major local bus routes. Stops would typically be spaced about one-quarter mile apart. It is envisioned that this system of limited-stop express service routes would initially consist of buses operating over arterial streets in mixed traffic, and would be upgraded over time to buses operating on reserved street lanes with priority treatment at traffic signals.

As envisioned under the plan:

- The express service would operate in both directions during all periods of the day and evening providing both traditional and reverse-commute service.
- The service would generally operate with a stop spacing of about one-quarter mile with one-half mile stop spacing in outlying portions of Milwaukee County and the Milwaukee urbanized area.
- The frequency of service provided would be about every 10 minutes during weekday peak periods, and about every 20 to 30 minutes during weekday off-peak periods and on weekends.
- The overall travel speed provided would be about 16 to 18 miles per hour, a significant improvement over the average 12 miles per hour speed provided by the existing local bus transit service.
- No express transit service existed in the Region in 2005. As proposed, about 17,000 vehicle-miles of express transit service would be provided on an average weekday in the Region in the year 2035.

Local Transit Service

The improvement and expansion of local bus transit service over arterial and collector streets, with frequent stops throughout the Kenosha, Milwaukee, and Racine urbanized areas is also recommended. Service would be provided on weekdays, and during weekday evenings, Saturdays, and Sundays. An approximately 59 percent increase in local bus service is recommended from the 61,100 vehicle-

Table 2

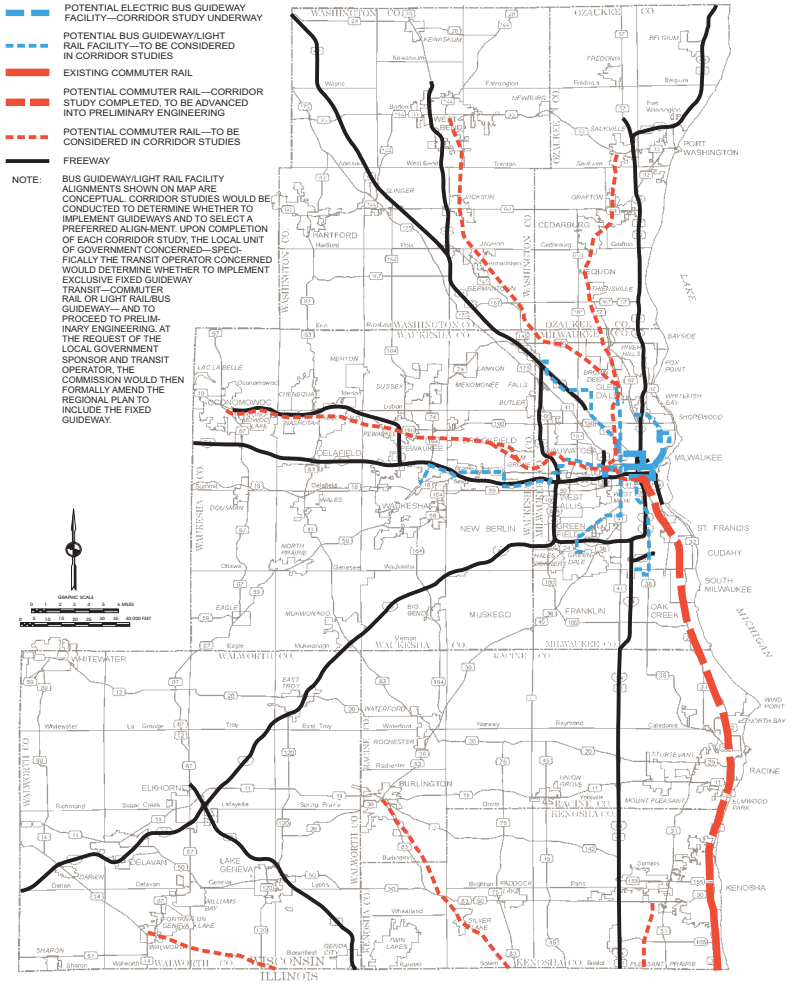
RECOMMENDED FREQUENCY OF LOCAL BUS SERVICE UNDER THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN

Area	Average Weekday Headways on Local Bus Service (minutes)		
	Morning and Afternoon Peak Periods	Midday Off peak Period	Evening Off-peak Period
Within Milwaukee County			
Central Milwaukee County	5-15	10-20	15-20
Remainder of Milwaukee County	15-20	20-30	20-60
Outside Milwaukee County	15-30	30-60	30-60

Source: SEWRPC.

Map 6

POTENTIAL RAPID TRANSIT COMMUTER RAIL AND EXPRESS TRANSIT BUS GUIDEWAY/LIGHT RAIL LINES UNDER THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN



Source: SEWRPC.

miles of local bus service provided in 2005 on an average weekday to 97,000 vehicle-miles in the plan design year 2035. The service improvements and expansion recommended include expansion of service area and hours, and significant improvements in the frequency of local transit service provided, particularly on major local routes. The recommended frequency of local bus service is shown in Table 2.

Paratransit Service

Paratransit service is recommended to be provided consistent with the Federal Americans with Disabilities Act (ADA) of 1990. Under the provisions of this Act, all transit vehicles that provide conventional fixed-route transit service must be accessible to persons with disabilities, including those persons using wheelchairs. All public entities operating fixed-route transit systems must also continue to provide paratransit service to those disabled persons within local transit service areas who are unable to use fixed-route transit services consistent with federally specified eligibility and service requirements. The complementary paratransit services must serve any person with a permanent or temporary disability who is unable independently to board, ride, or disembark from an accessible vehicle used to provide fixed-route transit service; who is capable of using an accessible vehicle, but one is not available for the desired trip; or who is unable to travel to or from the boarding or disembarking location of the fixed-route transit service. The planned paratransit service must be available during the same hours and on the same days as the fixed-route transit service, be provided to eligible persons on a "next-day" trip-reservations basis, and not limit service to eligible persons based on restrictions or priorities to trip purpose, and not be operated under capacity constraints which might limit the ability of eligible persons to receive service for a particular trip. The paratransit service fares must be no more than twice the applicable public transit fare per one-way trip for curb-to-curb service.

Upgrading to Rail Transit or Bus Guideways

Rapid and express transit service is recommended to initially be provided with buses. This bus service would ultimately be upgraded to commuter rail for rapid transit service and to bus guideway or light rail for express transit service. Map 6 displays seven potential future commuter rail lines and six potential future bus guideway/light rail lines within southeastern Wisconsin. Public transit cannot offer convenient accessibility to metropolitan area services for those without an automobile, offer an attractive alternative in heavily traveled corridors and dense urban activity centers, or provide a true choice for travel if it is caught in traffic congestion, and its travel times are not comparable to those of automobile travel. Upgrading to exclusive guideway transit may also be expected to promote higher density land development and redevelopment at and around the stations of the exclusive guideway transit facilities, promoting implementation of the regional land use plan.

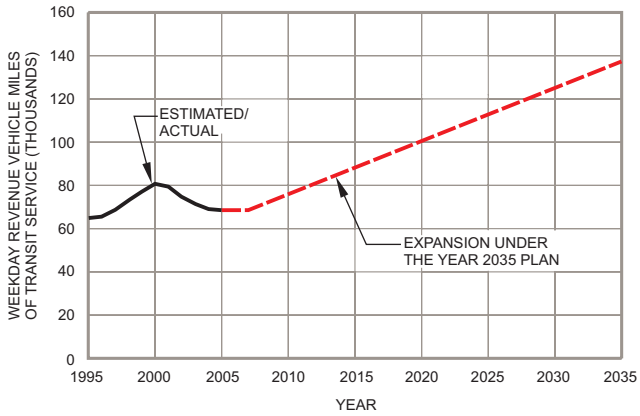
There are two efforts currently underway in southeastern Wisconsin considering upgrading to fixed guideway transit. Milwaukee County in cooperation with the City of Milwaukee and Wisconsin Center District is conducting the Milwaukee downtown connector study which is considering implementation of express transit electric bus guideway technology and buses operating in reserved street lanes. Rapid transit commuter rail in the Milwaukee-Racine-Kenosha corridor was recommended for implementation at the conclusion of a corridor transit alternatives analysis study. The Counties and Cities of Milwaukee, Racine, and Kenosha are currently completing a draft environmental impact statement of the recommended commuter rail extension. The 2005-2007 State budget created a three County regional transit authority for Kenosha, Milwaukee, and Racine Counties, which would be the operator of the proposed commuter rail service.

Summary and Conclusions—Public Transit

The recommended expansion of public transit in southeastern Wisconsin would represent a near doubling of transit service in southeastern Wisconsin by the year 2035. As shown in Figure 2, this would entail about a 2.5 percent annual increase in transit service to the year 2035, less than the level of annual increase which occurred between 1995 and 2000. Significant implementation of the year 2020 plan occurred between 1997 and 2000 as transit service expanded by over 25 percent. However due to State and local budget problems, transit service was significantly reduced from 2000 to 2005.

Figure 2

HISTORIC AND PLANNED VEHICLE-MILES OF PUBLIC TRANSIT SERVICE ON AN AVERAGE WEEKDAY IN THE SOUTHEASTERN WISCONSIN REGION: 1995-2035



Source: SEWRPC.

Implementation of this recommended expansion is dependent upon the continued commitment of the State to be a partner in the maintenance, improvement and expansion, and attendant funding of public transit. The State has historically funded 40 to 45 percent of transit operating costs, and has increased funding to address inflation in the cost of providing public transit, and to provide for transit improvement and expansion. State transit funding to the Milwaukee County Transit System increased by 29 percent from 1995 to 2000 and by 70 percent for all other transit systems in the Region, but only by 7 percent between 2000 and 2005 for the Milwaukee County Transit System and by 12 percent for all other transit systems. In comparison, local funding of public transit increased between 1995 and 2000 by 30 percent for the Milwaukee County Transit System and by 62 percent for other transit systems in the Region, and between 2000 and 2005 did not increase for the Milwaukee County Transit System—however, the Federal funding devoted to the transit system by Milwaukee County increased by nearly 100 percent—and increased by 73 percent for other transit systems in the Region. The 2003-2005 State budget provided no funding increase for public transit Statewide and the 2005-2007 budget only provides a 2 percent annual increase. An annual 4 to 5 percent increase may be essential to address rising costs, including inflation and real increases in fuel costs, and to support system improvement and expansion.

Implementation of the recommended expansion of public transit in southeastern Wisconsin will also be dependent upon attaining dedicated local funding for public transit. The local share of funding of public transit in southeastern Wisconsin is provided through county or municipal budgets, and represents about 15 percent of the total operating costs and 20 percent of total capital costs of public transit. Thus, the local share of funding public transit is largely provided by property taxes, and public transit must annually compete with mandated services and projects. Increasingly, due to the constraints in property tax based funding, counties and municipalities have found it difficult to provide funding to address transit needs, and to respond to shortages in Federal and State funding. Most public transit systems nationwide have dedicated local funding, typically a sales tax of 0.25 to 1.0 percent. A sales tax provides funding which should increase with inflation and area growth, thereby addressing funding needs attendant to inflation in the costs of providing public transit and transit system expansion.

A regional transit authority could also assist in implementing the recommended transit system expansion. A number of the proposed transit services extend across city and county boundaries. A regional transit authority could assist in the implementation of these proposed services.

Bicycle and Pedestrian Facility Element

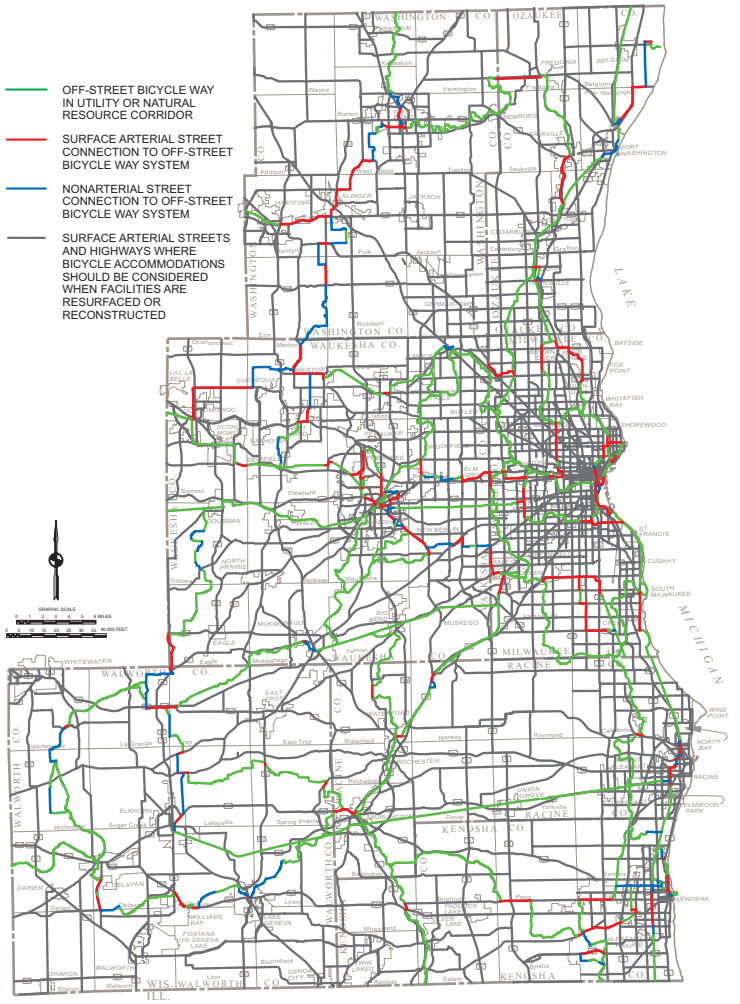
The bicycle and pedestrian facility element of the recommended plan is intended to promote safe accommodation of bicycle and pedestrian travel, and encourage bicycle and pedestrian travel as an alternative to personal vehicle travel. The plan envisions that as the surface arterial street system of about 3,300 miles in the Region is resurfaced and reconstructed segment-by-segment, the provision of accommodation for bicycle travel would be considered and implemented, if feasible, through bicycle lanes, widened outside travel lanes, widened shoulders, or separate bicycle paths. The surface arterial street system of the Region provides a network of direct travel routes serving virtually all travel origins and destinations within Southeastern Wisconsin. Arterial streets and highways, particularly those with high-speed traffic or heavy volumes of truck or transit vehicle traffic, require improvements such as extra-wide outside travel lanes, paved shoulders, bicycle lanes, or a separate bicycle path in order to safely accommodate bicycle travel. Land access and collector streets, because of low traffic volumes and speeds, are capable of accommodating bicycle travel with no special accommodation for bicycle travel.

The level and unit of government responsible for constructing and maintaining the surface arterial street or highway should have responsibility for constructing, maintaining, and funding the associated bicycle facility. A detailed evaluation of the alternatives for accommodation of bicycles on surface arterial streets or highways should necessarily be conducted by the responsible level and unit of government as part of the engineering for the resurfacing, reconstruction, and new construction of each segment of surface arterial. It is proposed that the Regional Planning Commission prepare an assessment of the priority of need for bicycle accommodation on each segment of the surface arterial street and highway system considering such factors, as traffic volume, composition, speed, and congestion.

It is also recommended that a system of off-street bicycle paths be provided between the Kenosha, Milwaukee, and Racine urbanized areas and the cities and villages within the Region with a population of 5,000 or more located outside these three urbanized areas. This system of off-street bicycle paths was initially also proposed in the adopted park and open space plans prepared by the Commission for each of the seven counties of the Region. These off-street bicycle paths would be located in natural resource and utility corridors and are intended to provide reasonably direct connections between the Region's urbanized and small urban areas on safe and aesthetically attractive routes with separation from motor vehicle traffic. Some on-street bicycle connections will be required to connect segments of this system of off-street paths. These connections if provided over surface arterials would include some type of bicycle accommodation—paved shoulders, extra-wide outside travel lanes, bicycle lanes, or separate parallel bicycle paths—or if provided over a nonarterial collector or land access street would require no special accommodation. The proposed system of on- and off-street bicycle facilities is shown on Map 7, and includes 575 miles of off-street bicycle paths with 147 miles of surface arterial and 83 miles of nonarterial connections. Approximately 203 miles of the planned 575 miles of off-street bicycle paths currently exist. Also shown on Map 7 is the surface arterial street and highway system within the Region proposed to be provided with bicycle accommodation.

Map 7

OFF-STREET BICYCLE PATHS AND SURFACE ARTERIAL STREET AND HIGHWAY SYSTEM BICYCLE ACCOMMODATION UNDER THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN



Source: SEWRPC.

The pedestrian facilities portion of the recommended bicycle and pedestrian facilities plan element is envisioned as a policy plan, rather than a system plan. It recommends that the various units and agencies of government responsible for the construction and maintenance of pedestrian facilities in southeastern Wisconsin adopt and follow a series of recommended standards and guidelines with regard to the development of those facilities, particularly within planned neighborhood units. These standards include the provision of sidewalks in the urban portions of the Region.

Transportation Systems Management

The transportation systems management element of the recommended year 2035 regional transportation plan includes measures intended to manage and operate existing transportation facilities to their maximum carrying capacity and travel efficiency, including: freeway traffic management, surface arterial street and highway traffic management, and major activity center parking management and guidance.

Freeway Traffic Management

Recommended measures to improve the operation and management of the regional freeway system include operational control, advisory information, and incident management measures, as well as a traffic operations center supporting these measures. Essential to achieving freeway operational control, advisory information, and incident management is the WisDOT traffic operations center (TOC) in the City of Milwaukee. At the TOC all freeway segments in the Milwaukee area are monitored, freeway operational control and advisory information is determined, and incident management detection and confirmation is conducted. The TOC is important to the safe and efficient operation of the regional freeway system and is in operation 365 days a year , 24 hours a day.

Operational Control

Measures to improve freeway operation during average weekday peak traffic periods and during minor and major incidents through monitoring of freeway operating conditions and control of entering freeway traffic include traffic detectors, freeway on-ramp-meters, and ramp-meter control strategy. Traffic detectors measure the speed, volume, and density of freeway traffic, and are used in operational control, as well as advisory information and incident management. Existing freeway system traffic detectors consist of detectors embedded in the pavement at one-half mile intervals on the freeways in Milwaukee County and on IH 94 in Waukesha County, and at about one to two mile intervals on IH 94 in Kenosha and Racine Counties. The data collected from these traffic detectors is monitored by the WisDOT at the TOC for the purposes of detecting freeway system travel speed and time, traffic congestion, traffic flow breakdowns,

and incidents. Freeway ramp meter traffic entry rates can be modified based upon the traffic volume and congestion indicated by the traffic detectors. Travel information on traffic congestion and delays can be provided to freeway system users through the WisDOT website and on variable message signs. Traffic speeds and congestion indicated by traffic detectors can instantaneously identify the presence of a freeway incident. It is recommended that existing freeway system traffic detectors be maintained, and that traffic detectors be installed on the freeway system throughout the Region at one-half mile intervals. The only exceptions for installing detectors on freeway segments may be those segments with current and expected future traffic volumes which would be substantially less than freeway traffic carrying design capacity, including IH 43 north of STH 57 in Ozaukee County, USH 45 north of the Richfield Interchange, USH 41 north of STH 60 in Washington County, and IH 43 and USH 12 in Walworth County.

Ramp-meters are traffic signals located on freeway entrance ramps or, in some cases, freeway-to-freeway entrance ramps, and are used to control the rate of entry of vehicles onto a freeway segment to achieve more efficient operation of the adjacent freeway segment and the downstream freeway system. To encourage ridesharing and transit use, preferential access for high-occupancy vehicles is provided at ramp-meter locations to allow the high-occupancy vehicles to bypass traffic waiting at a ramp-metering signal. There are 120 freeway on-ramps currently in the Milwaukee area equipped with ramp-meters. Buses and high-occupancy vehicles currently receive preferential access at 62 of the 120 on-ramp-meter locations. It is recommended that ramp-meters be installed on all freeway on-ramps within the Region, with high-occupancy vehicle preferential access provided at all metered ramps, particularly those which would be used by existing and planned public transit. The only exception for ramp-meter installation may be those freeway segments identified above which would be expected to carry current and future traffic volumes below their design capacity.

Another element of freeway operational control is the strategy used in the operational control of ramp-meters. The existing ramp-meters on the southeastern Wisconsin freeway system are controlled in two ways. Some are controlled in a "pre-timed" mode, operating during specified peak traffic hours of the weekday at specified release rates of vehicles. Others are controlled as well during specified peak traffic hours of the weekday, but the vehicle release rates are based upon adjacent freeway system traffic volume and congestion. It is recommended that the strategy of controlling ramp-meters through consideration of adjacent congestion be expanded throughout the freeway system, and that an operational control strategy be considered which would consider downstream freeway traffic congestion and seek to minimize total travel delay on the freeway system while providing for equitable average and maximum delays at each ramp-meter, and avoiding the extension of vehicle queues onto surface streets. It is also recommended that the need for expanded vehicle storage on freeway on-ramps be considered, and addressed, during the reconstruction of the regional freeway system.

Advisory Information Measures

Providing advisory information to motorists is an integral part of providing an efficient street and highway system. By providing information on current travel conditions, motorists can choose travel routes which are more efficient for their travel, and the result is a more efficient transportation system. Advisory information measures include permanent variable message signs (VMS), the WisDOT website, and provision of information to the media. The WisDOT uses the permanent VMS to provide real time information to travelers about downstream freeway traffic conditions, such as current travel times to selected areas, information about lane and ramp closures, and where travel delays begin and end. There are 23 permanent VMS located on the freeway system, primarily in the Milwaukee area, and 13 on surface arterials which connect with the freeway system primarily located in western Milwaukee County. It is recommended that variable message signs be provided on the entire freeway system, and on surface arterials leading to the most heavily used freeway system on-ramps.

The WisDOT also provides substantial information about current freeway system traffic conditions on a website using data collected from freeway system traffic detectors. The information includes maps depicting the current level of freeway traffic congestion and the locations of confirmed incidents, views of freeway system traffic available from the freeway system closed circuit television camera network, and current travel times and delays on the major freeway segments in the Milwaukee area. The data on the website is also available to the media and used in daily radio and television broadcasts. It is recommended that WisDOT continue to enhance and expand the information provided on its website and to the media, and consider deployment of a regional 511 traveler information system which would allow the public to dial "511" and receive automated messages about current travel conditions along their desired route through a series of predetermined automated menus.

Incident Management Measures

Incident management measures have as their objective the timely detection, confirmation, and removal of freeway incidents. As noted earlier, the WisDOT freeway system TOC and freeway system traffic volume detectors are essential to incident management, as well as freeway operational control and advisory information. Other incident management measures include closed circuit television, enhanced freeway location reference markers, freeway service patrols, crash investigation sites, the Traffic Incident Management Enhancement Program, ramp closure devices, and alternate route designations.

Closed-circuit television (CCTV) cameras provide live video images to the WisDOT and the Milwaukee County Sheriff's Department which allow for the rapid confirmation of congested areas and the presence of an incident, and immediate determination of the appropriate response to the incident and direction of the proper equipment to be deployed in response to the incident. There are currently 83 closed-circuit television cameras on the southeastern Wisconsin freeway system, covering Milwaukee County freeways, IH 94 and USH 41/45 in eastern Waukesha County, and IH 94 in Kenosha and Racine Counties. It is recommended that the CCTV camera network be provided on the entire regional freeway system, with the possible exception of the freeway segments identified earlier which carry existing and future traffic volumes well below their design capacity.

Enhanced reference markers assist motorists in identifying specific locations along a freeway segment when reporting incidents. These markers are typically small signs provided at one-tenth mile intervals along the freeway system which typically display the highway shield and mile marker. Enhanced reference markers are currently provided in Milwaukee County in the freeway median at each one-tenth mile on USH 45 from the Zoo Interchange to the Milwaukee-Waukesha County line, and on IH 94 from the Mitchell Interchange to the Illinois-Wisconsin State line, including the freeway segments of IH 94 in Kenosha and Racine Counties. It is recommended that enhanced reference markers be provided on the entire regional freeway system.

Freeway service patrols provide for rapid removal of disabled vehicles and initial response to clearing incidents. Freeway service patrols consist of specially equipped vehicles designed to assist disabled motorists and assist in clearance of incidents. Freeway service patrol vehicles may be equipped to provide limited towing assistance, as well as minor services such as fuel, oil, water, and minor mechanical repairs. Freeway service patrols currently operate in a limited role on the Milwaukee County freeway system and on IH 94 in Kenosha, Racine, and Waukesha Counties. In each of these four counties, service patrols operate during weekday peak traffic periods. In Milwaukee County service patrols also operate all day during weekdays, and in Kenosha and Racine Counties, service patrols also operate all day during weekends. In Kenosha, Racine, and Waukesha Counties, one service patrol vehicle serves 12 to 15 miles of freeways, and in Milwaukee County one service patrol vehicle serves 70 miles of freeways. Expansion of the freeway service patrol is recommended to serve the entire regional freeway system, and to provide greater coverage including all day weekday and weekend service, evening service, and increased vehicle coverage of one vehicle per 12 to 15 miles of freeway.

Crash investigation sites are designated safe zones for distressed motorists to relocate to if they are involved in a crash or an incident on the freeway. There are 35 crash investigation sites on the southeastern Wisconsin freeway system, with the largest concentration—24 of the 35, or about 69 percent—located on the system in Milwaukee County. It is recommended that the WisDOT evaluate the extent of use and attendant benefits of existing crash investigation sites, and consider expansion as needed to serve the entire regional freeway system.

The Traffic Incident Management Enhancement (TIME) Program, sponsored by the WisDOT, has served to bring together, and coordinate, the transportation engineering, law enforcement, media, emergency responders, transit, tow and recovery, and other freeway system operational interests at monthly meetings. The goals of the TIME program are to improve and enhance freeway incident management, improve freeway safety, and enhance the quality and efficiency of freeway travel. It is recommended that the TIME program continue to be operated and sponsored by WisDOT.

Ramp closure devices have been deployed on IH 94 in Kenosha, Racine, and Waukesha Counties. The ramp closure devices are either Type III barricades or swing arm gates. These ramp closure devices allow for the closure of freeway on-ramps during planned and unplanned major incidents, such as special events and severe inclement weather. It is recommended that WisDOT evaluate the use and attendant benefits of existing ramp closure devices, and consider their application throughout the Region.

Alternate routes are designated, clearly marked and signed surface arterial street and highway routes which generally parallel freeway segments. These routes would be intended to be used by motorists during major freeway incidents and ramp closures and during particularly extreme congestion. Motorists would be directed through advisory information to these routes during major incidents and periods of particularly extreme congestion. It is recommended that WisDOT and the Regional Planning Commission, together with the concerned and affected local governments, examine the potential for the designation of alternative routes, and consider implementation of a pilot effort in a designated corridor.

Surface Arterial Street and Highway Traffic Management

This group of recommended transportation system management measures would attempt to improve the operation and management of the regional surface arterial street and highway network, and include improved traffic signal coordination, intersection traffic engineering improvements, curb lane parking restrictions, access management, and advisory information.

Coordinated traffic signal systems provide for the efficient progression of traffic along arterial streets and highways allowing motorists to travel through multiple signalized intersections along an arterial route at the speed limit minimizing or eliminating the number of stops at signalized intersections. In the Region, coordinated traffic signal systems currently generally range from systems comprising two traffic signals to systems comprising about 100 traffic signals. Approximately 1,100 of the 1,700 traffic signals in the Region, or about 65 percent, are part of a coordinated signal system. It is recommended that Commission staff work with State and local government to document existing and planned arterial street and highway system traffic signals and traffic signal systems, and develop recommendations for improvement and expansion of coordinated signal systems.

It is also recommended that State and local governments aggressively consider and implement needed individual arterial street and highway intersection improvements, such as adding right- and/or left-turn lanes; improvements in the type of traffic control deployed at the intersection, including two- or four-way stop control, roundabouts, or signalization; or improvements in signal timing at individual signalized intersections. This measure proposes that State, county, and municipal governments each prepare a prioritized short-range (two to six year) program of arterial street and highway intersection improvements under their jurisdiction, pursue aggressive implementation of the programs, and review and update the programs every two to five years.

It is also recommended that local governments consider implementation of curb-lane parking restrictions during peak traffic periods in the peak traffic direction as traffic volumes and congestion increase. These parking restrictions would be implemented rather than the widening with additional lanes or construction of new arterial streets.

Access management is also recommended to improve transportation systems operations and provide for full use of roadway capacity. Access management involves applying standards for the location, spacing, and operation of driveways, median openings, and street connections. It is proposed that State, county, and municipal governmental units with arterial streets and highways under their jurisdiction adopt access management standards, consider and implement these standards as development takes place along arterials under their jurisdiction, and prepare and implement access management plans along arterials which currently are developed and have access which violates these standards.

Advisory information should also be provided to motorists concerning the surface arterial street and highway network in the Region. It is recommended that the WisDOT improve and expand the data provided on its website (travel times, congestion maps, and camera images) concerning freeway travel to include surface arterial street and highway travel, beginning with the pilot route designated as an alternative route to a segment of the freeway system.

Major Activity Center Parking Management and Guidance

Another recommended transportation system management measure would attempt to improve traffic operation conditions by reducing the traffic circulation of motorists seeking parking in major activity centers. The City of Milwaukee currently has an initiative to construct a SummerFest shuttle bus parking management and guidance system. This initiative would provide static and dynamic signing indicating the location of parking structures and the availability of parking in those structures for a number of parking structures in the central business district (CBD) which are near SummerFest shuttle bus routes. This recommended measure supports the City of Milwaukee initiative and proposes expansion of parking management and guidance systems to incorporate all of the Milwaukee CBD at all times of the year.

Regional Transportation Operations Program

It is also recommended that WisDOT in cooperation with SEWRPC and all transportation system operators in the Region work to prepare a Regional Transportation Operation Program (RTOP). It is envisioned that the RTOP would program high priority short-range (three to five year) operational improvement projects for implementation, in part based upon the transportation systems management recommendations in the regional transportation system plan.

Travel Demand Management Element

The travel demand management measures included in the recommended year 2035 regional transportation plan include measures intended to reduce personal and vehicular travel or to shift such travel to alternative times and routes, allowing for more efficient use of the existing capacity of the transportation system. These measures are in addition to the public transit and pedestrian and bicycle plan elements previously described.

Seven categories of travel demand management measures are recommended for inclusion in the year 2035 plan: high-occupancy vehicle preferential treatment, park-ride lots, transit pricing, personal vehicle pricing, travel demand management promotion, transit information and marketing, and detailed site-specific neighborhood and major activity center land use plans.

High-Occupancy Vehicle Preferential Treatment

This group of recommended travel demand management measures would attempt to provide preferential treatment for transit vehicles, vanpools, and carpools on the existing arterial street and highway system. The recommended preferential treatment category consists of four specific travel demand management measures: the provision of high-occupancy vehicle (HOV) queue bypass lanes at metered freeway on-ramps; reserved bus lanes along congested surface arterial streets and highways; transit priority signal systems; and preferential carpool and vanpool parking.

The provision of HOV queue bypass lanes at metered freeway on-ramps currently exists at 62 of the 120 metered freeway on-ramp locations within the Milwaukee area. The recommended travel demand measure recommends that consideration be given to providing HOV bypass lanes at all metered freeway on-ramps within the Region, dependent upon right-of-way and on-ramp geometric design constraints. For this measure to be truly effective, strict enforcement of HOV bypass lanes will be required.

Reserved bus lanes similar to those along Blue Mound Road in Waukesha County allow transit vehicles to bypass vehicle queues attendant to traffic signals on congested arterial streets and highways. These reserved lanes may be expected to reduce transit travel times and improve transit travel time reliability during peak travel periods. This recommended travel demand

management measure would expand the use of reserved bus lanes throughout the Region on the congested surface arterial streets and highways which currently, or may be expected in the future, to accommodate express and major local transit routes, and on the surface arterial portion of rapid transit routes.

The third recommended travel demand management measure within the high-occupancy vehicle preferential treatment category is transit priority signal systems. This recommended measure would allow transit vehicles to extend the end of the green phase of traffic signals as they approach a signalized intersection. This recommended measure would include transit priority signal systems along all express and major local transit routes, and the surface arterial portion of rapid transit routes within the Region.

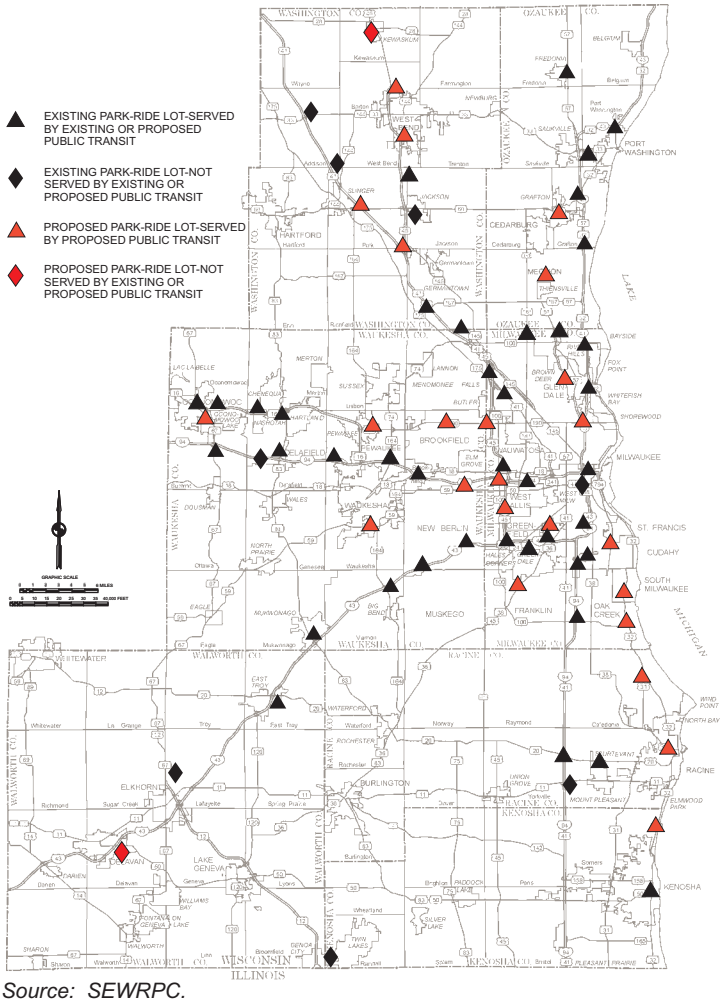
The fourth recommended travel demand management measure within the high-occupancy vehicle preferential treatment category is preferential carpool and vanpool parking. This recommended measure would be voluntary and would propose that employers providing free/subsidized parking for their employees consider providing and enforcing preferential parking for those employees who carpool or vanpool to the employment site. This recommended measure may reduce vehicle trips by encouraging ridesharing.

Park-Ride Lots

To promote carpooling and the resultant more efficient use of the Region's transportation system, a network of park-ride lots are recommended to facilitate carpooling. Map 8 shows the recommended system of park-ride lots including existing park-ride lots and those recommended to be served by public transit. Park-ride lots are recommended along all major routes at their major intersections and interchanges where sufficient demand may be expected to warrant provision of an off-street parking facility.

Map 8

RECOMMENDED PARK-RIDE LOTS WITHIN SOUTHEASTERN WISCONSIN UNDER THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION PLAN



Source: SEWRPC.

Transit Pricing

This group of recommended travel demand management measures would build upon existing transit pricing programs conducted by the transit operators in the Region. The recommended transit pricing category consists of three specific travel demand management measures: annual transit pass programs, monthly or weekly pass programs, and vanpool programs.

The Milwaukee County Transit System has implemented a pass system at four colleges and universities which provides for free transit use with a reduced fee included in student tuition and fees. This annual transit pass program should be expanded to include the other local public transit operators in the Region and additional colleges and universities within the Region. This annual pass program should also be expanded to employers, with the Region's transit operators negotiating an annual fee with individual employers, which would allow those employers to provide each employee with an annual transit pass.

Monthly or weekly discount pass programs currently exist for three of the Region's public transit operators—the Milwaukee County Transit System, the Racine Belle Urban System, and the Waukesha Metro Transit System. This recommended monthly or weekly pass program would allow employers to offer their employees discounted monthly or weekly passes, where the employer and the transit operator have negotiated an agreement in which they both agree to subsidize a portion of the monthly or weekly pass.

The third proposed travel demand management measure within the transit pricing category is expansion of existing vanpool programs. Currently, the Milwaukee County Transit System operates a vanpool program with about 20 vanpools in which a group of employees who live in the same general area split the operation, maintenance, and a portion of the capital costs—currently 20 percent—of a van. Currently, the Milwaukee County Transit System vanpool program requires one end of the work trip to be in Kenosha, Milwaukee, Ozaukee, Racine, Washington, or Waukesha Counties, and that one end of the work trip is outside the regular Milwaukee County Transit System service area.

Personal Vehicle Pricing
The proposed personal vehicle pricing group of travel demand management measures would propose to allocate a larger percentage of the full costs of construction, maintenance, and operation of street and highway facilities and services directly on the users of the system. The proposed personal vehicle pricing category consists of two specific travel demand management measures—cash-out of employer-paid parking and auto pricing.

Cash-out of employee paid parking would recommend that employers currently providing free/subsidized parking to employees would voluntarily begin charging their employees the market value of parking. Employers could offset the additional cost of parking through cash payment or salary increases to employees. This recommended measure would potentially reduce vehicle-trips and vehicle-miles of travel through the increased use of transit, ridesharing, walking, and bicycling, as some employees may "pocket" the cash payment and use other modes of travel.

The second recommended travel demand management measure within the personal vehicle pricing category encourages the continued and expanded use of user fees to pay the costs of construction, maintenance, and operation of street and highway facilities and services. Currently, user fees primarily include the Federal and State motor fuel tax and vehicle registration fees. These user fees currently fund 100 percent of the costs associated with State highways and about 20 to 25 percent of the costs associated with county and municipal streets and highways. There is substantial and growing opposition to increases in motor fuel taxes. In addition, there is the potential in the future for technological advances, such as increased fuel efficiency and alternative fuels, to render the current motor fuel tax obsolete. However, there is merit in having the users of the transportation system pay the actual costs of constructing, maintaining, and operating the transportation system. Travel behavior is affected by the cost of travel, and user fees can encourage more efficient travel.

Travel Demand Management Promotion
A regionwide program to aggressively promote transit use, bicycle use, ridesharing, pedestrian travel, telecommuting, and work-time rescheduling, including compressed work weeks is recommended to encourage alternatives to drive alone personal vehicle travel. The program would include education, marketing, and promotion elements.

Transit Information and Marketing
Recommended transit information and marketing measures would include the continuation and expansion of the joint marketing efforts of the transit operators within southeastern Wisconsin. It is also recommended that a single website be developed in which transit users could access all necessary information for each transit system in southeastern Wisconsin. This recommended website would allow a potential transit user to enter such information as beginning and ending addresses of a desired trip within the Region, and then would display the most feasible transit routing of the desired trip including all fares, transfers, and schedules.

The third recommended transit information and marketing measure is real-time travel information. This recommended measure would utilize global positioning system (GPS) data to provide real-time transit information to transit riders at transit centers and transit stops, including transit vehicle arrival times, and real-time maps, showing where on the route a transit vehicle is currently located.

Detailed Site-Specific Neighborhood and Major Activity Center Land Use Plans
The preparation and implementation by local governmental units of detailed, site-specific neighborhood and major activity center plans to facilitate travel by transit, bicycle, and pedestrian movement and reduce dependence on automobile travel is recommended, as it is recommended in the regional land use plan.

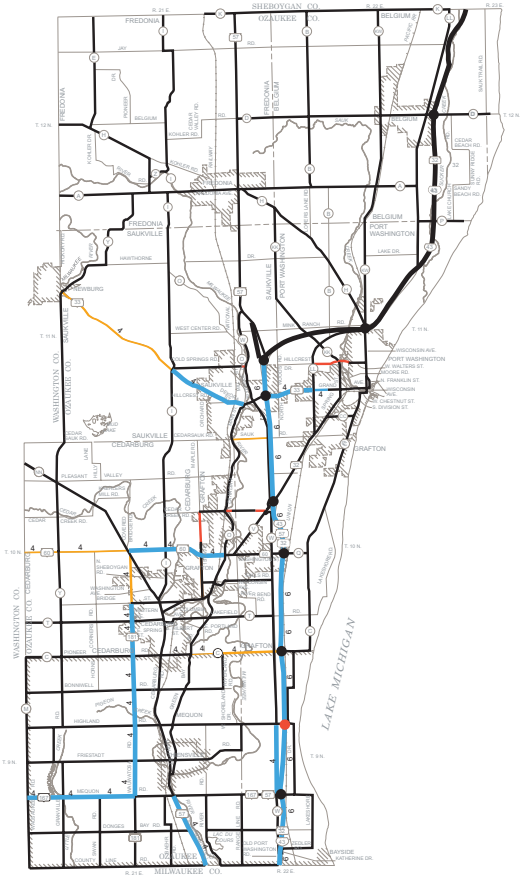
Arterial Street and Highway Element
The arterial street and highway element of the recommended year 2035 regional transportation plan totals 3,637 route-miles. Approximately 88 percent, or 3,191 of these route-miles, are recommended to be resurfaced and reconstructed to their same capacity. Approximately 358 route-miles, or less than 10 percent of the total recommended year 2035 arterial street and highway system are recommended for widening to provide additional through traffic lanes, including 127 miles of freeways. The remaining 88 route-miles, or about 2 percent of the total arterial street mileage, are proposed new arterial facilities. Thus, the plan recommendations envision over the next 30 years capacity expansion of 12 percent of the total arterial system, and viewed in terms of added lane-miles of arterials only a 4 percent expansion over the next 30 years.

Map 9 displays the recommended year 2035 regional transportation plan arterial street preservation, improvement, and expansion by county. Highway improvements were recommended to address the residual congestion which may not be expected to be alleviated by recommended land use, systems management, demand management, bicycle and pedestrian facilities, and public transit measures in the recommended plan. Each recommended arterial street and highway improvement, expansion, and preservation project would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and final decisions as to whether and how a planned project will proceed to implementation will be made by the responsible State, county, or municipal government at the conclusion of preliminary engineering.

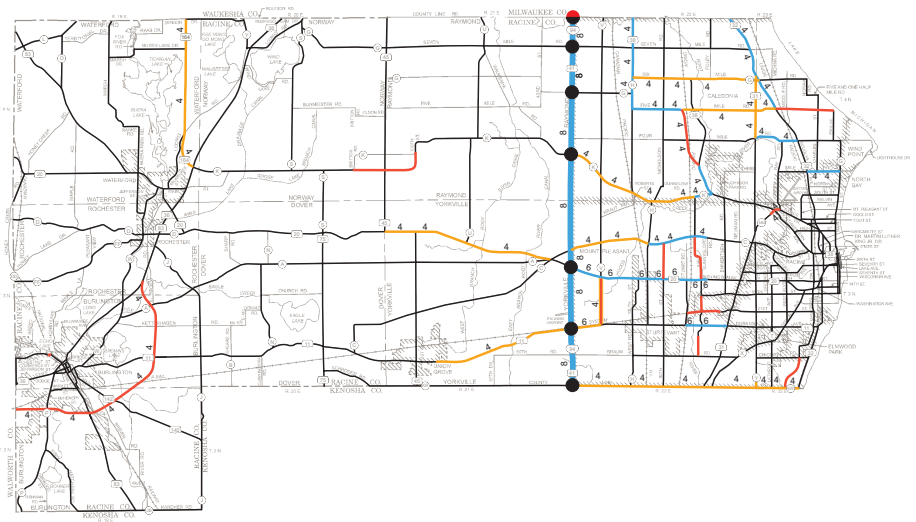
Map 9

ARTERIAL STREET AND HIGHWAY SYSTEM ELEMENT OF THE RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION SYSTEM PLAN[a, b, c]

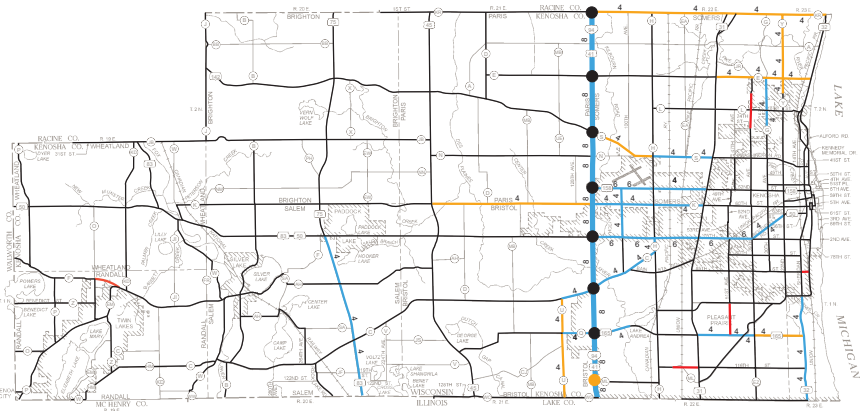
OZAUKEE COUNTY



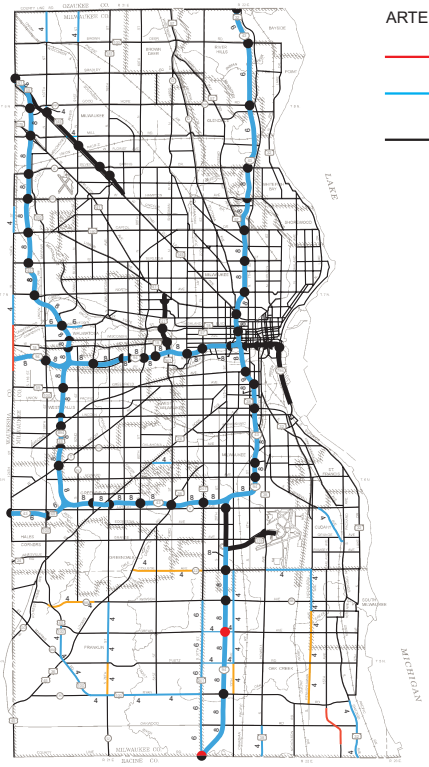
RACINE COUNTY



KENOSHA COUNTY



MILWAUKEE COUNTY



ARTERIAL STREET OR HIGHWAY

- NEW
- WIDENING AND/OR OTHER IMPROVEMENT TO PROVIDE SIGNIFICANT ADDITIONAL CAPACITY
- RESURFACING OR RECONSTRUCTION TO PROVIDE ESSENTIALLY THE SAME CAPACITY
- RESERVE RIGHT-OF-WAY TO ACCOMMODATE FUTURE IMPROVEMENT (ADDITIONAL CAPACITY/ OR NEW FACILITY)
- NEW FACILITY WITH RIGHT-OF-WAY TO ACCOMMODATE FUTURE IMPROVEMENT (ADDITIONAL LANES)
- 4 — NUMBER OF TRAFFIC LANES FOR NEW OR WIDENED AND/OR IMPROVED FACILITY (2 LANES WHERE UNNUMBERED)

FREEWAY INTERCHANGE

- NEW INTERCHANGE
- NEW HALF INTERCHANGE
- EXISTING INTERCHANGE

[a] *Each proposed arterial street and highway improvement and expansion, and, as well, preservation project, would need to undergo preliminary engineering and environmental studies by the responsible State, county, or municipal government prior to implementation. The preliminary engineering and environmental studies will consider alternatives and impacts, and final decisions as to whether and how a plan and project will proceed to implementation will be made by the responsible State, county, or municipal government (State for state highways, County for county highways, and municipal for municipal arterial streets) at the conclusion of preliminary engineering.*

The 127 miles of freeway widening proposed in the plan and in particular the 19 miles of widening in the City of Milwaukee (IH 94 between the Zoo and Marquette interchanges and IH 43 between the Mitchell and Silver Spring interchanges), will undergo preliminary engineering and environmental impact statement by the Wisconsin Department of Transportation. During preliminary engineering, alternatives will be considered, including rebuild-as-is, various options of rebuild to modern design standards, compromises to rebuilding to modern design standards, rebuilding with additional lanes, and rebuilding with the existing number of lanes. Only at the conclusion of the preliminary engineering would a determination be made as to how the freeway would be reconstructed.

[b] *The plan recommends in addition to the three new freeway interchanges shown on this map, that the Wisconsin Department of Transportation during its preliminary engineering for IH 94 consider the provision of interchanges with CTH K in Kenosha County and CTH C in Racine County including through the provision of collector-distributor roadways connecting CTH K and CTH C directly to adjacent interchanges. The plan also identifies additional potential new future freeway interchanges, and recommends that action be taken by the local governments to preserve the potential necessary right-of-way to assure that the future development of these interchanges are not precluded. Should the concerned local governments take the next step of participating with the Wisconsin Department of Transportation in the conduct of a preliminary engineering study of the interchange, and the preliminary engineering conclude with a recommendation to construct the interchange, the Regional Planning Commission, upon request of the concerned local governments and the Wisconsin Department of Transportation, would take action to amend the regional plan to recommend the construction of the interchange. These potential future new interchanges are CTH B and Bloomfield Road with USH 12, CTH F with IH 43, and CTH ML with IH 94.*

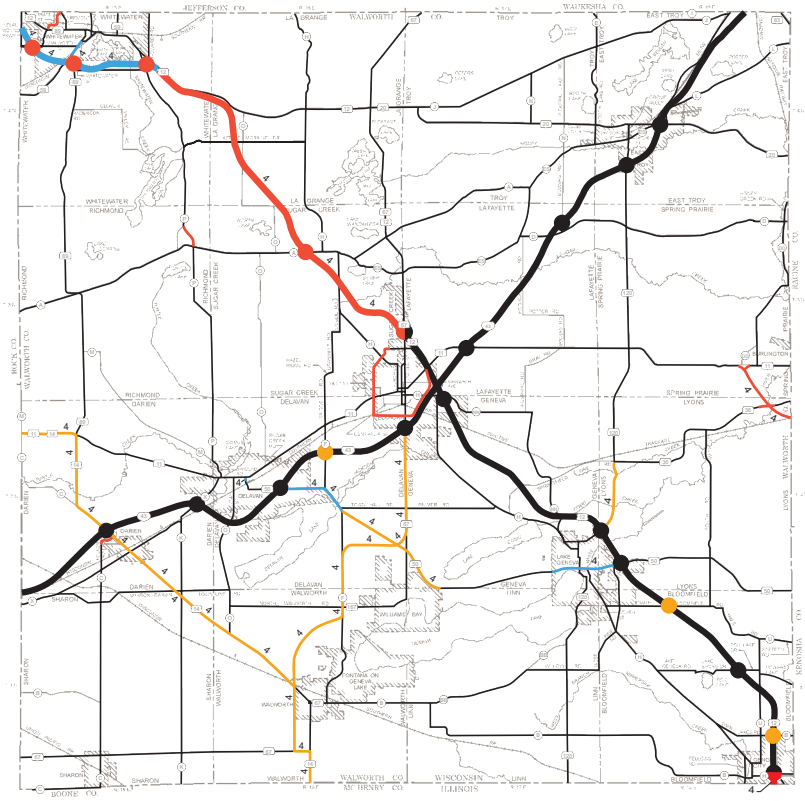
The plan also provides further recommendations with respect to half freeway interchanges. The plan recommends that the Wisconsin Department of Transportation during the reconstruction of the freeway system:

- *Convert the 27th Street with IH 94 and CTH P with IH 94 interchanges to full interchanges, and consider conversion from half to full interchanges of other half interchanges where spacing and other conditions permit;*
- *Consider as an alternative where conditions permit the combination of selected half interchanges into one full interchange—for example, STH 100 and 124th Street with IH 43; and*
- *Retain all other existing half interchanges and examine during preliminary engineering the improvement of connection between adjacent interchanges.*

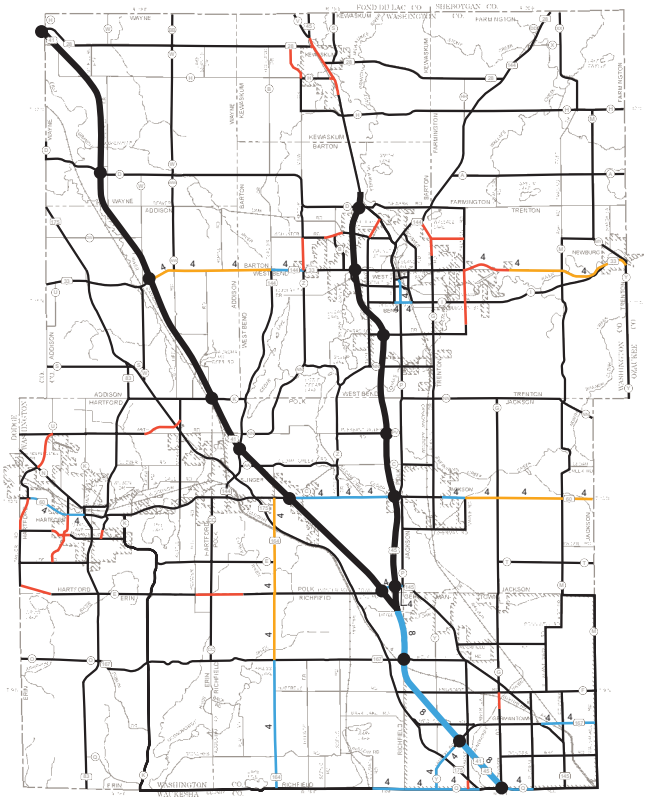
[c] *Subsequent to the completion of the regional transportation plan update and reevaluation, more detailed analyses will be conducted with county jurisdictional highway system planning advisory committees addressing the following arterials and potentially considering various alternatives including do-nothing, restrict parking, widen with additional lanes, construct bypass, and improve/construct parallel arterials: STH 33 in the Village of Saukville, STH 20/83 in the Village of Waterford, STH 50 in the City of Lake Geneva, STH 60 in the Village of Jackson, STH 164 in the Village of Big Bend, and CTH K in Franksville.*

Map 9 (continued)

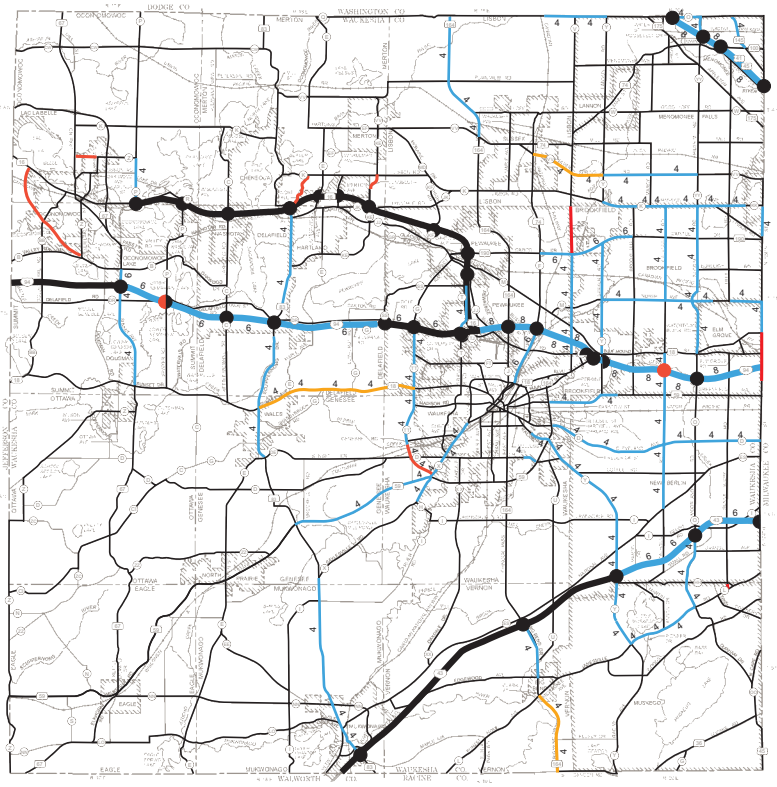
WALWORTH COUNTY



WASHINGTON COUNTY



WAUKESHA COUNTY



NOTE: INDIVIDUAL 8 1/2" BY 11" COUNTY MAPS MAY BE VIEWED IN AN ELECTRONIC VERSION OF THIS NEWSLETTER AT WWW.SEWRPC.ORG/REGIONALPLANS.

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Table 3

YEAR 2035 POPULATION AND EMPLOYMENT SERVED BY PUBLIC TRANSIT IN THE REGION UNDER THE PRELIMINARY RECOMMENDED PLAN: 2035

	Existing System		Recommended Plan	
Service Type	Population Served	Employment Served	Population Served	Employment Served
Rapid and Express	384,300	219,700	779,700	644,900
Local	1,218,200	866,900	1,419,600	1,020,900
Total [a]	1,282,900	876,100	1,447,800	1,046,800

[a] The total population and employment served does not equal the sum of the service area figures for rapid/express and local service as the service areas overlap. For the total service area figures, the population and employment in the overlapping areas was counted only once.

Source: SEWRPC

EVALUATION OF THE RECOMMENDED TRANSPORTATION PLAN

This section of the newsletter provides a summary of the key benefits and costs of the recommended regional transportation plan.

Transportation System Level of Service

Public Transit

The public transit element of the recommended regional transportation plan represents a substantial improvement over the existing transit system of the Region with respect to area of the Region served by public transit, days and hours of transit service, frequency of transit service, and speed of transit service.

Map 10 illustrates how well the recommended transit system plan element serves the areas within the region with population and employment densities sufficient to support public transit use. Table 3 illustrates the significant increase in population and employment served by public transit, particularly by rapid and express transit services.

Under the public transit element of the recommended plan, public transit would also be significantly expanded in terms of days, hours, and frequency of service. Rapid transit service would be expanded from a weekday, peak period, peak direction service to a daily, all day and evening, bidirectional service with more attractive service frequency. An express transit service would be created which would be available daily throughout the day and evening at attractive service frequencies. Local transit service would be significantly improved with more frequent bus service throughout the Region, and initiation or expansion of weekend bus service in the Kenosha, Racine, and Waukesha areas.

Public transit service would be much faster under the recommended plan due to the emphasis on rapid and express transit service, and proposed improved service frequencies. Map 11 illustrates the improvement in transit travel times for selected trips within Milwaukee County.

Arterial Streets and Highways

As shown in Table 4 and Map 12, if no improvements are made to the region's transportation system over the next 30 years, traffic congestion on an average weekday may be expected to double. Morever, if transportation improvements are limited to the public transit, bicycle and pedestrian, travel demand management , and transportation systems management elements of the recommended plan, only a modest reduction—about 10 percent—of this projected doubling of congestion may be expected. However, with the arterial street and highway system element of the recommended plan, the projected doubling of congestion over the next 30 years may be avoided and year 2035 congestion may be expected to be modestly less than current levels of weekday congestion.

Also, the recommended plan may also be expected to have travel safety benefits with more travel on public transit as opposed to automobile travel and more travel on freeways as opposed to surface arterials, and more travel on less congested freeways. The crash rates for surface arterials are about three times higher than those for freeways for total crashes and fatalities and injuries. The crash rates for extremely congested freeways are almost triple that for uncongested and moderately congested freeways, and for severely congested freeways are about 60 percent higher than uncongested and moderately congested freeways. Rear-end crash rates are 5 to 15 times higher on congested freeways with the most extremely congested freeways experiencing the highest crash rates.

Transportation System Cost

The recommended plan represents about a 30 percent increase in cost compared to a "no-build" plan, and about a 10 percent increase in the current expenditures on transportation in the Region, as shown in Table 5. The public transit element of the plan represents about 58 percent of the increase in transportation system costs attendant to the plan, and the highway element represents about 42 percent of the increase.

Built and Natural Environment Impacts

The estimated impact on the built and natural environment of the arterial street and highway element of the recommended plan over the next 30 years is presented in Table 6. The impact is relatively modest. For example, about 157 acres of wetlands may be affected, or about five acres per year over the next 30 years, representing in total an impact on about 0.05 percent of the 273,100 acres of existing wetlands in the Region. Also, for the potential 127 miles of freeway proposed to be widened to carry additional lanes, about 35 residences are estimated to be needed to be acquired, or about one per year over the next 30 years.

With respect to air pollutant emissions as shown in Table 7, transportation system air pollutant emissions have been declining even with increasing traffic, and are projected to continue to decline even with increasing traffic.

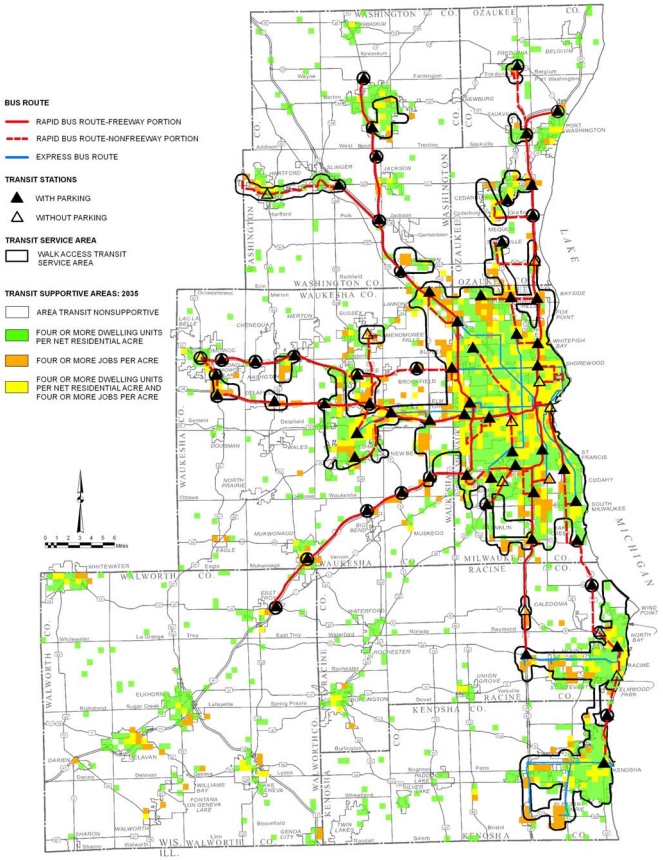
SUMMARY AND CONCLUSIONS: RECOMMENDED YEAR 2035 REGIONAL LAND USE AND TRANSPORTATION PLANS

The year 2035 regional land use plan is intended to serve as a guide to land use development and open space preservation in the Region. The plan provides the basis for the year 2035 regional transportation plan, and provides a basis for continuing regional park and open space planning, regional water quality management planning, regional water supply system planning, and other regional planning programs. The year 2035 regional land use plan is also intended to serve as a framework for county and local comprehensive planning within the Region.

The regional land use plan was designed to accommodate growth in population, households, and employment in the Region

Map 10

YEAR 2035 TRANSIT SUPPORTIVE LAND AREA SERVED BY RECOMMENDED YEAR 2035 REGIONAL TRANSIT SYSTEM

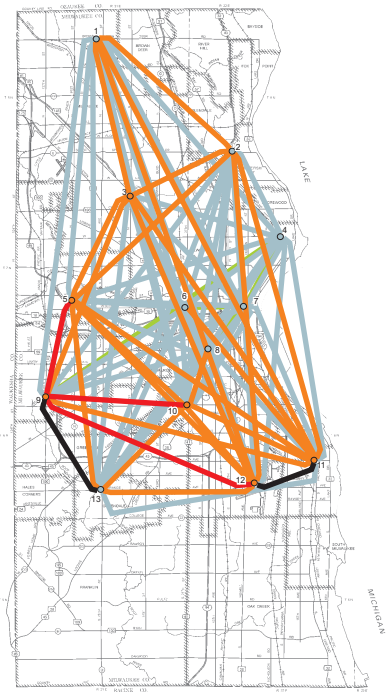


Source: SEWRPC.

Map 11

COMPARISON OF TRANSIT TRAVEL TIMES BETWEEN SELECTED LOCATIONS IN MILWAUKEE COUNTY DURING WEEKDAY PEAK PERIODS UNDER THE EXISTING SYSTEM AND RECOMMENDED PLAN

EXISTING SYSTEM



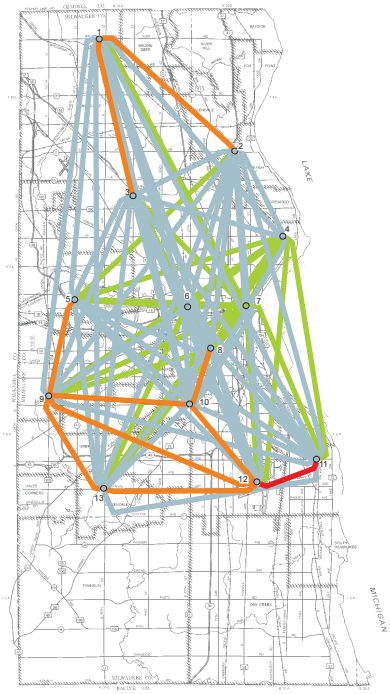
TRANSIT TO AUTOMOBILE TRAVEL TIME RATIO

- 1.50 AND LESS
- 1.51 - 1.99
- 2.00 - 2.99
- 3.00 - 3.99
- 4.00 - 4.99
- 5.00 AND OVER

AVERAGE TRANSIT TO AUTOMOBILE TRAVEL TIMERATIO FOR SELECTED TRIPS FROM LOCATION

- 1.50 AND LESS
- 1.51 - 1.99
- 2.00 - 2.99
- 3.00 - 3.99
- 4.00 - 4.99
- 5.00 AND OVER

RECOMMENDED PLAN



Source: SEWRPC.

Table 4

COMPARISON OF EXISTING YEAR 2001 AND FORECAST FUTURE YEAR 2035 AVERAGE WEEKDAY TRAFFIC CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION UNDER THE NO-BUILD PLAN AND THE RECOMMENDED PLAN: 2035[a]

TOTAL ARTERIAL SYSTEM—FREEWAYS AND SURFACE ARTERIALS

County	Under or At Design Capacity		Over Design Capacity						Total Mileage
			Moderate Congestion		Severe Congestion		Extreme Congestion		
	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	Mileage	Percent of Total	
Existing Base Year 2001									
Kenosha	303.2	95.5	9.9	3.1	1.5	0.5	3.0	0.9	317.6
Milwaukee	641.1	82.0	72.1	9.2	24.7	3.2	43.4	5.6	781.3
Ozaukee	244.2	97.4	4.3	1.7	1.5	0.6	0.8	0.3	250.8
Racine	341.3	96.8	9.4	2.7	0.5	0.1	1.4	0.4	352.6
Walworth	430.1	98.4	5.1	1.2	1.1	0.3	0.3	0.1	436.6
Washington	391.1	96.2	15.4	3.8	- -	- -	- -	- -	406.5
Waukesha	650.9	87.2	70.7	9.5	11.4	1.5	13.4	1.8	746.4
Region	3,001.9	91.2	186.9	5.7	40.7	1.2	62.3	1.9	3,291.8
Year 2035 No-Build Plan									
Kenosha	298.9	83.7	44.7	12.5	3.3	0.9	10.2	2.9	357.1
Milwaukee	533.1	67.0	133.0	16.7	26.1	3.3	103.6	13.0	795.8
Ozaukee	265.2	87.7	31.4	10.4	2.2	0.7	3.7	1.2	302.5
Racine	379.2	90.4	33.9	8.1	2.9	0.7	3.3	0.8	419.3
Walworth	441.1	94.1	14.7	3.1	3.2	0.7	9.6	2.1	468.6
Washington	382.6	89.9	31.0	7.3	7.1	1.7	5.0	1.1	425.7
Waukesha	567.9	74.1	113.0	14.7	26.0	3.4	59.4	7.8	766.3
Region	2,868.0	81.1	401.7	11.4	70.8	2.0	194.8	5.5	3,535.3
Year 2035 Recommended Plan									
Kenosha	342.0	94.6	15.4	4.3	3.9	1.1	- -	- -	361.3
Milwaukee	704.5	88.1	46.4	5.8	20.9	2.6	28.0	3.5	799.8
Ozaukee	305.8	98.2	2.8	0.9	2.1	0.7	0.6	0.2	311.3
Racine	435.5	97.8	8.7	2.0	0.9	0.2	- -	- -	445.1
Walworth	466.2	98.8	5.0	1.1	0.6	0.1	- -	- -	471.8
Washington	448.7	97.6	10.7	2.3	- -	- -	0.6	0.1	460.0
Waukesha	691.6	87.9	72.0	9.1	10.6	1.3	13.1	1.7	787.3
Region	3,394.3	93.3	161.0	4.4	39.0	1.1	42.3	1.2	3,636.6

FREEWAY SYSTEM

Estimated Existing Year 2001

Highest Level of Hourly Congestion Experienced	Miles of Congested Freeways		Average Hours of Congestion on an Average Weekday			
	Number	Percent of Freeway System	Extreme	Severe	Moderate	Total
Extreme	24.4	9.0	1.4	3.3	4.4	9.1
Severe	19.8	7.3	--	1.5	2.5	4.0
Moderate	20.8	7.8	--	--	2.2	2.2
Total	65.0	24.1	--	--	--	--
Forecast Year 2035 Under No Build Plan						
Extreme	53.8	19.9	1.4	3.2	4.2	8.8
Severe	20.7	7.7	--	1.3	2.7	4.0
Moderate	53.5	19.8	--	--	2.8	2.8
Total	128.0	47.4	--	--	--	--
Forecast Year 2035 Under Recommended Plan						
Extreme	19.8	6.9	1.1	2.5	3.5	7.1
Severe	21.3	7.4	--	1.5	2.5	4.0
Moderate	25.7	9.0	--	--	1.9	1.9
Total	66.8	23.3	--	--	--	--

Footnote to Table 4

[a] *Congestion on freeways and surface arterials maybe described as follows:*

Freeway			
Level of Traffic Congestion	Level of Service	Average Speed	Operating Conditions
None	A and B	Freeway free-flow speed	No restrictions on ability to maneuver and change lanes.
None	C	Freeway free-flow speed	Some restrictions on ability to maneuver and change lanes.
Moderate	D	1 to 2 mph below free-flow speed	Substantial restrictions on ability to maneuver and change lanes.
Severe	E	Up to 10 mph below free-flow speed	Virtually no ability to maneuver and change lanes. Operation at maximum capacity. No usable gaps in the traffic stream to accommodate lane changing.
Extreme	F	Typically 20 to 30 mph or less	Breakdown in vehicular flow with stop-and-go, bumper-to-bumper traffic.

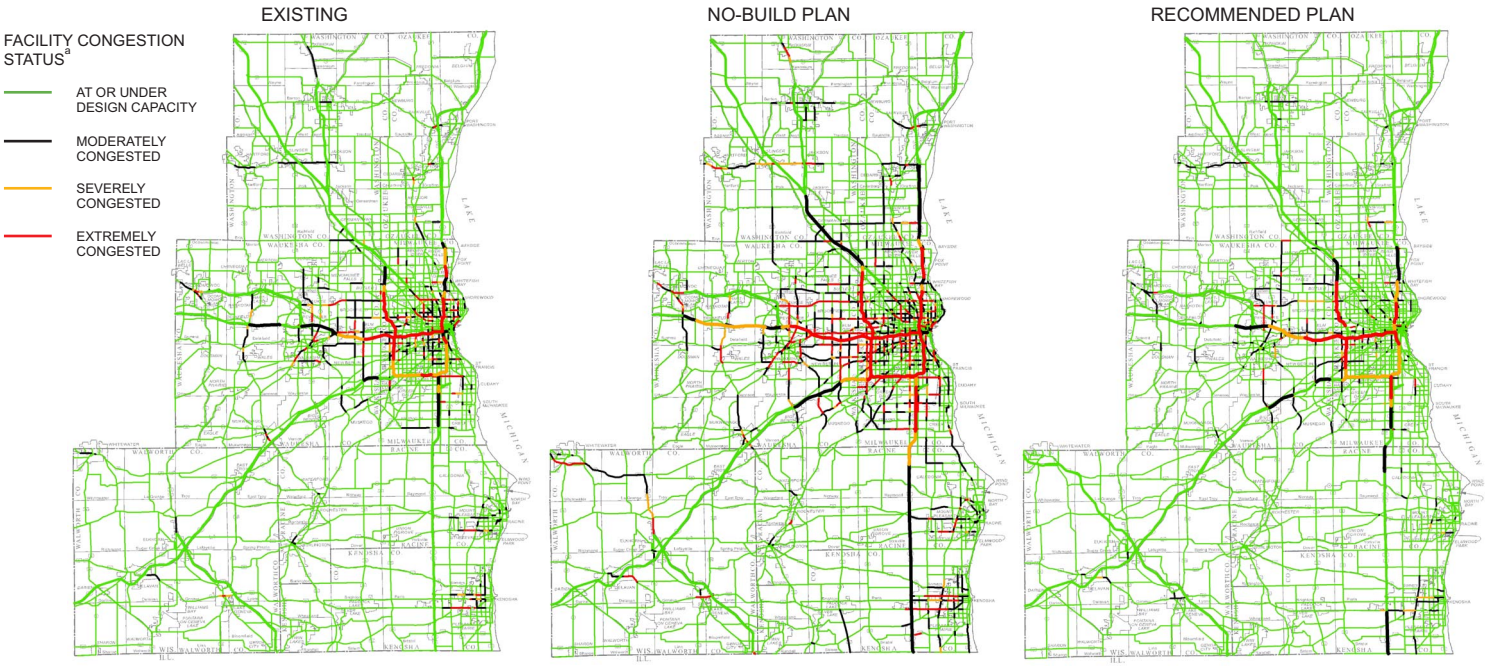
Surface Arterial			
Level of Traffic Congestion	Level of Service	Average Speed	Operating Conditions
None	A and B	70 to 100% of free-flow speed	Ability to maneuver within traffic stream unimpeded. Control delay at signalized intersections in minimal.
None	C	50 to 100% of free-flow speed	Restricted ability to maneuver and change lanes at mid-block locations.
Moderate	D	40 to 50% of free-flow speed	Restricted ability to maneuver and change lanes. Small increases in flow lead to substantial increases in delay and decreases in travel speed.
Severe	E	33 to 40% of free-flow speed	Significant restrictions on lane changes. Traffic flow approaches instability.
Extreme	F	25 to 33% of free-flow speed	Flow at extremely low speeds. Intersection congestion with high delays, high volumes, and extensive queuing.

Source: SEWRPC

Map 12

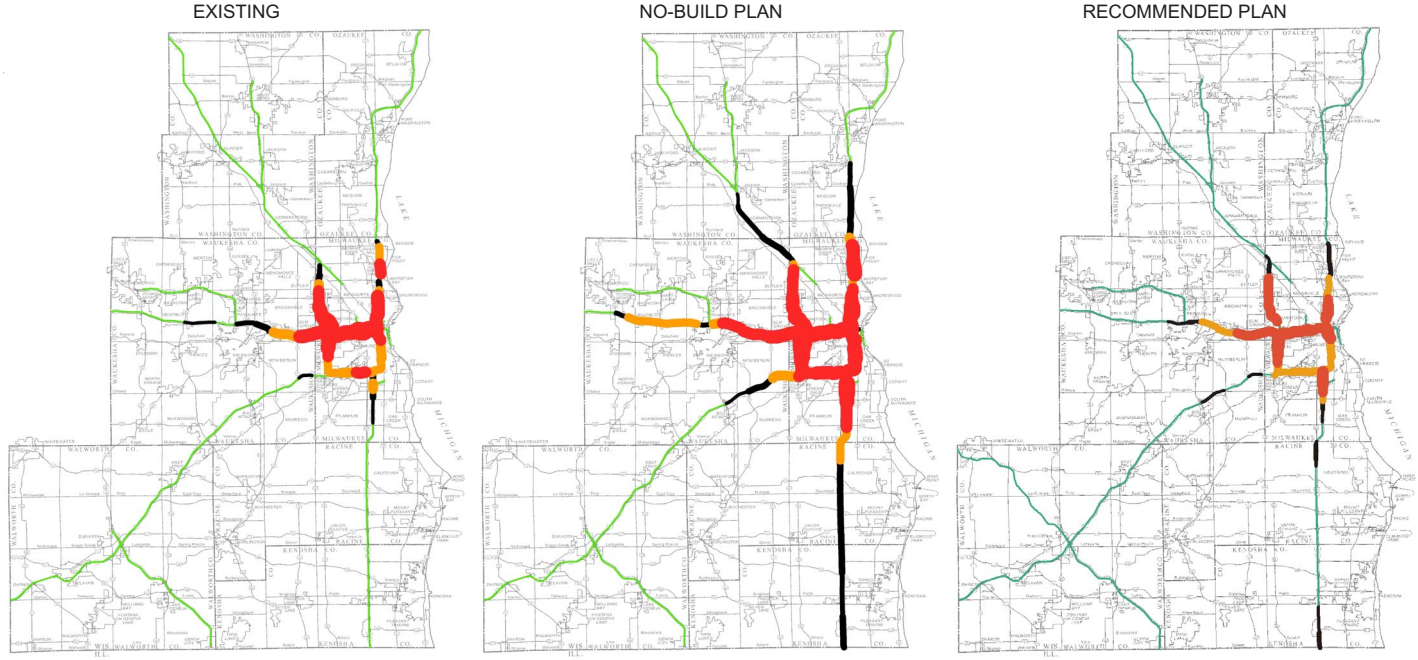
COMPARISON OF EXISTING YEAR 2001 AND FORECAST YEAR 2035 AVERAGE WEEKDAY CONGESTION ON THE ARTERIAL STREET AND HIGHWAY SYSTEM IN THE REGION UNDER THE NO-BUILD PLAN AND THE RECOMMENDED PLAN

TOTAL ARTERIAL SYSTEM



[a]For a description of congestion levels see the footnote to table 4.

FREEWAY SYSTEM



MOST SEVERE LEVEL OF WEEKDAY HOURLY CONGESTION EXPERIENCED	ESTIMATED HOURS OF CONGESTION ON AN AVERAGE WEEKDAY	ESTIMATED AVERAGE WEEKDAY HOURS OF CONGESTION BY CONGESTION LEVEL		
		EXTREME	SEVERE	MODERATE
--	NO CONGESTION	--	--	--
MODERATE	1	--	--	1
MODERATE	3	--	--	3
SEVERE	3	--	1	2
SEVERE	4	--	1	3
SEVERE	4	--	2	2
EXTREME	6	1	2	3
EXTREME	8	1	3	4
EXTREME	11	2	4	5
EXTREME	13	2	5	6
EXTREME	14	2	5	7
EXTREME	15	3	5	7
EXTREME	16	4	5	7
EXTREME	17	4	6	7

GRAPHIC SCALE
0 1 2 3 4 5 6 Miles

Source: SEWRPC.

envisioned under the Commission's intermediate growth projections, including an 18 percent increase in population, a 24 percent increase in households, and a 12 percent increase in employment in the Region through the year 2035. The year 2035 regional land use plan embodies the following vision for the Region over the course of the next three decades:

- New urban land would be provided through the infilling and renewal of existing urban areas and through the orderly expansion of existing urban areas – resulting in a more compact and efficient urban settlement pattern, one that is readily served by basic urban services and facilities and that maximizes the use of existing urban service and facility systems;
- Residential development and redevelopment would occur in a variety of residential neighborhood types and in mixed use settings – with an emphasis on medium and high residential densities;

Table 5

ESTIMATED AVERAGE ANNUAL TRANSPORTATION SYSTEM CAPITAL AND OPERATION AND MAINTENANCE COSTS IN THE REGION OVER THE PERIOD 2006-2035: NO-BUILD AND RECOMMENDED PLANS

Cost Element	Average Annual Cost: 2006 -2035		
	No-Build Plan (millions of dollars)	Recommended Plan (millions of dollars)	Percent Increase
System Element Costs			
Arterial Streets and Highways			
Construction	322	379	18
Operation and Maintenance	58	67	16
Subtotal	380	446	17
Public Transit			
Construction and Equipment	19	32	68
Operation and Maintenance	119	197	66
Subtotal	138	229	66
Total	518	675	30

Source: SEWRPC.

- Growth in the economic base of the Region would be accommodated through the development and redevelopment of major economic activity centers as well as community-level and neighborhood-level centers; and
- The land development needs of the Region would be met while preserving the best remaining elements of the natural resource base – most of which are located within the environmental corridors and isolated natural resource areas – and preserving the most productive farmland.

The year 2035 regional transportation system plan is designed to serve, be consistent with, and promote implementation of, the year 2035 regional land use plan. The regional transportation plan provides the vision for the needed improvement and expansion of the transportation system serving the Region to the year 2035. The potential of more efficient land use and expanded public transit, systems management, bicycle and pedestrian facilities, and demand management is considered first to alleviate traffic congestion. Arterial street and highway improvements are only then considered to address any residual congestion. Each element of the regional transportation plan is considered to be of equal priority, and each element needs to be implemented to provide a comprehensive, multi-modal, balanced, high quality transportation system in southeastern Wisconsin. Implementation of the year 2035 regional transportation system plan would permit avoiding a doubling of traffic congestion over the next 30 years and embodies the following vision for transportation system improvement and development within the Region to the year 2035:

- Public transit service in the Region would double from 69,000 to 138,000 vehicle-miles of service on an average weekday, including the development of true rapid and express transit systems;
- Consideration would be given through the conduct of corridor studies to the upgrading of bus rapid transit service to commuter rail service and of express bus transit service to bus guideway or light rail service;
- Bicycle accommodation would be considered and implemented as the 3,300 mile surface arterial street and highway system is resurfaced, reconstructed, and newly constructed through such means as bicycle lanes, widened outside travel lanes, paved and widened shoulders, and separate parallel bicycle paths;
- A system of 575 miles of off-street bicycle/pedestrian paths would be developed primarily within natural resource and utility corridors to provide reasonably direct connections between the Region's urbanized and small urban areas;
- Efforts to operate and manage the existing arterial street and highway system as efficiently as possible, obtaining the maximum capacity from that system would be continued and expanded, including expansion of the existing freeway traffic management system and expansion of existing surface arterial street and highway management efforts;
- Efforts to encourage reductions in personal and vehicular travel would be continued and expanded, including expansion of the existing number of park-ride lots within the Region, provision of exclusive high-occupancy bypass lanes at freeway on-ramps, provision of surface arterial street and highway express bus lanes, and provision of transit signal priority systems;
- Widening with additional lanes to provide additional traffic carrying capacity would be considered on 358 miles of the existing 3,500 miles of arterial streets and highways in the Region, including 127 miles of freeways; and
- Construction of new arterial streets and highways would be considered consisting of about 88 miles of the planned year 2035 arterial street and highway system in the Region.

Table 6

ESTIMATED RIGHT-OF WAY IMPACTS ATTENDANT TO THE IMPLEMENTATION OF THE RECOMMENDED PLAN: 2006-2035

Category	Recommended Plan				
	Standard Arterial Improvement/ Expansion	Rebuild Freeway System to Modern Design Standards	Provide Additional Lanes on 127 miles of Freeway	Extend Freeway in Walworth County USH 12	Region Arterial System Total
Relocations					
Residential	101	151	35	2	289
NonResidential					
Commercial, Office and Industrial	14	18	5	0	37
Government/Institution	1	2	0	0	3
Historic Buildings and Sites					
Buildings	0	0	0	0	0
Sites	0	0	0	0	0
Park Lands (Acres) [a]					
State	2.9	0	0	19.2	22.1
County	8.1	13.8	1.1	0	23.0
Local	1.2	2.3	0	0	3.5
Environmental Corridors (Acres) [b]					
Primary	102.3	67.5	6.8	27.1	203.7
Secondary	61.1	1.2	1.9	0	64.2
Isolated Natural Resource Area	29.2	4.1	0.6	17.7	51.6
Other Sensitive Lands (Acres) [d]					
Wetland [c]	104.9	38.2	5.4	8.3	156.8
Natural Areas	3.9	3.9	0	0	7.8
Critical Species Habitat Areas	0	0	0	0	0
Geological Areas	66.9	0	0	22.8	89.7
Archeological Areas	0	0	0	0	0
DNR Managed Lands	0.6	0	0	31.7	32.3
DNR Land Legacy Report	44.6	26.3	0	17.2	88.1
Land Trust of Other Conservation Organization Lands	1.1	0	0	0	1.1
Prime Agricultural Lands (Class I or Class II)	313.2	26.4	6.3	340.0	685.9

[a] *Existing State park lands in the Region total about 57,100 acres, existing county park lands total about 29,700 acres, and existing local park lands total about 18,000 acres .*

[b] *Existing primary environmental corridors in the Region total about 296,000 acres, existing secondary environmental corridors total about 48,000 acres, and existing isolated natural resource areas total about 40,000 acres.*

[c] *Existing wetlands in the Region total about 273,100 acres. Approximately 29 of the 38 acres of wetlands estimated to be impacted are located within primary or secondary environmental corridors, or an isolated natural resource area.*

[d] *Existing natural areas in the Region total about 57,600 acres, critical species habitat areas total about 14,700 acres, geological areas total about 101,200 acres, Wisconsin Department of Natural Resources managed lands total about 57,900 acres, Wisconsin Department of Natural Resources legacy lands total an estimated 137,800 acres, and land trust or conservation organization lands total about 6,900 acres. Existing prime agricultural lands in the Region total about 604,800 acres .*

Source: SEWRPC.

Table 7

EXISTING AND FORECAST YEAR 2035 SOUTHEASTERN WISCONSIN REGION TRANSPORTATION SYSTEM AIR POLLUTANT EMISSIONS AND FUEL CONSUMPTION

Plan Alternatives	Existing Year 2001 and Forecast Year 2035 Air Pollutant Emissions (Tons per Hot Summer Weekday)												Existing Year 2001 and Forecast Year 2035 Fuel Consumption (Gallons per Average Weekday)
	Volatile Organic Compounds [a]	Nitrogen Oxides [a]	Carbon Monoxide	Carbon Dioxide	Fine Particulate Matter	Sulfur Dioxide	Ammonia	Butadiene	Acetaldehyde	Acrolein	Benzene	Formaldehyde	
Existing 2001	50.03	114.23	592.48	12,368.0	1.77	2.77	4.84	0.20	0.43	0.03	1.40	0.63	1,236,800
2035 Recommended Plan	13.50	13.36	264.88	12,677.0	0.80	0.59	6.55	0.05	0.11	0.01	0.36	0.17	1,267,700

[a] *Estimated 1990 emissions were 154.6 tons of volatile organic compounds and 136.3 tons of nitrogen oxides. Estimated 1999 emissions were 61.3 tons of volatile organic compounds and 118.0 tons of nitrogen oxides.*

Source: SEWRPC.

ADDITIONAL INFORMATION

Electronic copies of SEWRPC Planning Report No. 48, *A Regional Land Use Plan for Southeastern Wisconsin: 2035*, and SEWRPC Planning Report No. 49, *A Regional Transportation System Plan for Southeastern Wisconsin: 2035* as well as electronic versions of each issue of the study newsletters, meeting minutes and agendas, and all other project materials are available at www.sewrpc.org/regionalplans. Printed copies of SEWRPC Planning Reports Nos. 48 and 49 may be obtained from the Commission at a cost of $10 each inside the Region and $20 each outside the Region. More information can be obtained by contacting:

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