

## **CHAPTER 8**

### **TRANSPORTATION FACILITIES ELEMENT**

The transportation system of Waukesha County benefits all County and Village of Eagle residents by providing for the movement of goods and people into, out of, through, and within the Village. An efficient, durable, cost-effective transportation system is essential to the sound social, community, and economic development of the Village, County and of the Southeast Wisconsin Region. An understanding of the existing transportation system and future improvements is fundamental to the preparation of a comprehensive plan for Waukesha County, and the Village of Eagle.

The term transportation system describes several different aspects including:

- Transportation options used to move people and products
- Levels of jurisdictional authority
- Facilities that a user might access to begin, change, or end a trip.

When people hear the term transportation system, they often think only of roads. While roads account for the majority of the transportation system, they are not the only component. A transportation system includes: roads, transit services, rail services, bicycle lanes, paths, trails, airports, pedestrian ways, ports, and harbors.

The Eagle Advisory Committee has identified a number of strengths, weaknesses and concerns about the current status of transportation facilities.

#### **TRANSPORTATION STRENGTHS:**

- The established County Trunk Highway System is effective
- Other modes of transportation exist within the county and region
- Official mapping is being completed by the Town, Village, and County for improved inter-connectivity to roadway systems
- There is a reasonable network of roads in good condition within the Village
- The Village maintains all local Village streets and has a 5 year maintenance plan in place, based on usage and road condition

#### **TRANSPORTATION CONCERNS AND WEAKNESSES:**

- Access to the Interstate Highway System from the Village is approximately 9 miles from I-43, and 14 miles from I-94
- There is a lack of travel lanes or safe routes for pedestrian and bicycle use
- There is a lack of transportation opportunities available for senior or disabled persons
- There is a tendency for the County to upgrade highways only after volume or impact is realized instead of doing a more effective analysis of projecting these changes.
- Inconsistency exists with mapped right-of-way widths between the County and Village maps that impact existing and future land uses in the Village

## TRANSPORTATION FACILITIES AND SERVICES

This section presents inventories of the existing transportation system in Waukesha County. Much of this inventory is derived from the regional transportation system plan developed by SEWRPC.

### Streets and Highways

Waukesha County has over 2,915 miles of federal, state, county, and local roads within the County and over 373,000 registered automobiles, trucks, semi-trailers, and motorcycles (Table 8-1 and Table 8-2). Four freeways, Interstate Highway 43, Interstate Highway 94, State Highway 16, and U.S. Highway 41/45 serve Waukesha County. In addition, the County is served by state highways 36, 59, 67, 74, 83, 100, 145, 164, 175, and 190. The County Trunk System includes over 391 miles of roads. Over 78 percent of road miles in Waukesha County are local village, town, or city roads. This street and highway system within the County serves several important functions; including providing movement of vehicular traffic; providing access for vehicular traffic to abutting land uses; providing for the movement of pedestrians and bicycles; and serving as a location for utilities and storm water drainage facilities. Streets and highways fall into a three-category hierarchy that, includes arterial, collector, and land access streets. This hierarchy of streets and highways provides for the safe, efficient, and convenient movement of goods and people by auto transport throughout the Village, Waukesha County and the Region.

**Table 8-1**

### ROAD MILEAGE IN WAUKESHA COUNTY: 2005

	<b>State Trunk System (freeways, U.S., STH)</b>	<b>County Trunk System</b>	<b>Local Roads (Town, Village, City)</b>	<b>Total</b>
Waukesha County	232.18	391.78	2,291.90	2,915.86

*Source: Wisconsin Department of Transportation*

**Table 8-2**

### REGISTERED VEHICLES IN WAUKESHA COUNTY: JULY 2007

	<b>Automobiles</b>	<b>Trucks</b>	<b>Semi- Trailers</b>	<b>Motorcycles</b>	<b>Total</b>
Waukesha County	175,209	156,026	20,268	21,742	373,245

*Source: Wisconsin Department of Transportation*

### State Trunk Highways

The State trunk highway system, which includes Interstate Highways, U.S. – numbered highways, and State highways, generally carry the highest traffic volumes, provide the highest traffic speeds, have the highest degree of access control, and serve land uses of statewide or regional significance. State trunk highways serve the longest trips, principally carrying traffic traveling through Waukesha County and between Waukesha County and surrounding counties. County trunk highways should form an integrated system together with the state trunk highways

and principally serve traffic between communities in the County and land uses of countywide importance. Local arterial streets and highways would serve the shortest trips, serve locally-oriented land uses, carry the lightest traffic volumes on the arterial system, carry traffic at lower speeds, have the least access control, and predominately serve traffic within a community.

### **Arterial Streets**

An arterial is a high-volume street that functions to conduct traffic between communities and activity centers and to connect communities to interstate highways. Arterial streets are defined by SEWRPC as streets and highways which are principally intended to provide a high degree of travel mobility, serving the through movement of traffic, and providing transportation service between major sub-areas of an urban area or through an area. In a rural area, an arterial is a high-volume street that functions to conduct traffic between communities and activity centers and to connect communities to interstate highways. Together, arterial streets should form an integrated, area wide system. The most heavily traveled arterial streets and highways in the Village are State Highway 67, State Highway 59, and County Trunk Highway NN.

In addition to their functional classification, arterial streets and highways are also classified by the unit of government that has the responsibility, or jurisdiction, over the facility. The Wisconsin Department of Transportation (WisDOT) has jurisdiction over the State trunk highway system, Waukesha County has jurisdiction over the County trunk highway system, and each local government unit has jurisdiction over local arterial streets within their community.

### **Collector Streets**

Collector streets are defined as streets which are intended to serve primarily as connections between the arterial system and the land access street system. They may include frontage roads that parallel freeways within the County. In addition to collecting traffic from, and distributing traffic to, the land access streets, the collector streets provide a secondary function of providing access to abutting properties. As a result, collector and land access streets are sometimes referred to as nonarterial, or local streets.

### **Local Access Streets**

The function of local access streets is to provide access to abutting property. As the lowest-order street in the hierarchy the access street is designed to conduct traffic between dwelling units and higher order streets. Local access streets are sometimes referred to as minor streets and may include frontage roads that parallel freeways.

### **County and Local Street Inventory**

The Wisconsin Department of Transportation (WisDOT) maintains a detailed database of county and local street information in the “Wisconsin Information System for Local Roads” (WISLR). Physical attributes such as right-of-way and pavement width, number of traffic lanes, type of surface and pavement rating, the presence and type of shoulders or curbs, and the presence of sidewalks are available through a database that can be accessed through the WisDOT website by registered users. Administrative information, including the functional classification and owner of street, can also be obtained. The information in the database is provided by county and local governments, and is intended to assist in the reporting of roadway pavement conditions. Under Section 86.302 of the Wisconsin Statutes, pavement ratings must be submitted to WisDOT by each county and local government every other year. The PASER method (pavement surface evaluation and rating) is the most commonly used method in Wisconsin.

### **Village of Eagle Street Inventory**

As mentioned above the Wisconsin Department of Transportation (WisDOT) maintains a detailed database of Township street information in the "Wisconsin Information System for Local Roads" (WISLR). The information in the database is provided by the Village, and is intended to assist in the reporting of roadway pavement conditions. The Village of Eagle has 2.9 miles of public highways and 11.32 miles of local streets.

### **County Traffic Counts**

WisDOT conducts average daily traffic counts for county trunk highways, state trunk highways, and U.S. Highways in Waukesha County every three years, with the most recent traffic count for the Village of Eagle Area being done in 2006 as shown in Map 8-1. The Village of Eagle is shown in Map 8-2. Traffic counts are reported as the number of vehicles expected to pass a given location on an average day of the year. This value is called the "annual average daily traffic" or AADT and is represented on traffic count or traffic volume maps. The AADT is based on a short-term traffic count, usually 48 hours, taken at the location. This count is then adjusted for the variation in traffic volume throughout the year and the average number of axles per vehicle. The short-term counts are collected over a three-year cycle at nearly 26,000 rural and urban locations throughout the state. County data from 2000, 2003, and 2006 can be found at <http://www.dot.wisconsin.gov/travel/counts/waukesha.htm>.

## **PUBLIC TRANSPORTATION**

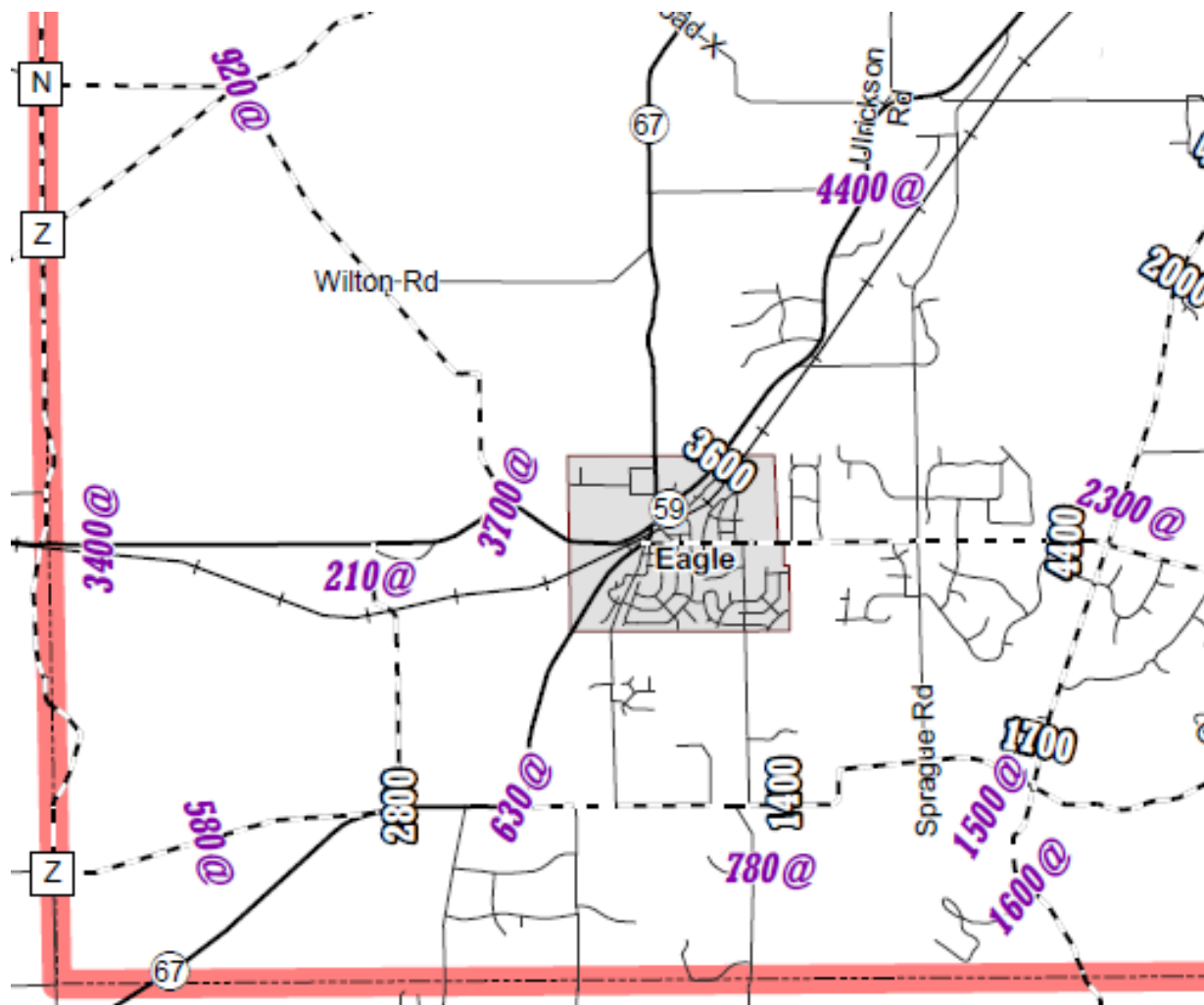
Public transportation is the transportation of people by publicly operated vehicles between trip origins and destinations, and may be divided into service provided for the general public and service provided to special population groups. Examples of special group public transportation include yellow school bus service funded by local school districts, and fixed route bus service provided by counties or municipalities. Public transportation service provided to the general public in Waukesha County may further be divided into the following three categories:

- Intercity or interregional public transportation, which provides service across regional boundaries and includes Amtrak railway passenger service, interregional bus service, and commercial air travel.
- Urban public transportation, commonly referred to as public transit, which is open to the general public and provides service within and between large urban areas. The fixed-route bus transit system provided by Waukesha Metro falls into this category.
- Rural and small urban community public transportation, which is open to the general public and provides service in and between small urban communities and rural areas, and may provide connections to urban areas.

Public transit is essential in any metropolitan area to meet the travel needs of persons unable to use personal automobile transportation and to provide an alternative mode of travel, particularly in densely developed urban communities and activity centers. However, their use in suburban or rural settings is not cost effective.

Map 8-1

**ANNUAL AVERAGE DAILY TRAFFIC COUNTS  
INTO THE VILLAGE OF EAGLE AREA: 2006**



Source: Wisconsin Department of Transportation

**9999 - AADT - 2006**

9999#- AADT - 2005

9999^ - AADT - 2002

9999\* - AADT - 2004

9999~ - AADT - 2001

9999@ - AADT - 2003

9999x- AADT - 2000 or older

Character following AADT on map designates year

## ANNUAL AVERAGE DAILY TRAFFIC COUNTS WITHIN THE VILLAGE OF EAGLE: 2006



9999# - AADT - 2005      9999^ - AADT - 2002  
9999\* - AADT - 2004      9999~ - AADT - 2001  
9999@ - AADT - 2003      9999x - AADT - 2000 or older  
Character following AADT on map designates year

8 - 6

## **INTERREGIONAL PUBLIC TRANSPORTATION**

Air, bus, ferry, and rail carriers provide Waukesha County residents with public transportation service between the Southeastern Wisconsin Region and a number of cities and regions across the Country. Since none of these types of interregional public transportation are provided in the Village, only a brief explanation of each type of service will be provided.

### **Air Service**

Air services provide people, businesses, and goods with direct access to regional, national and international markets. The primary commercial airport serving Waukesha County with scheduled air carrier service is General Mitchell International Airport, owned and operated by Milwaukee County. Most residents of the Village of Eagle are within 45 miles of this regional airport for personal service needs.

Two principal airport facilities in Waukesha County provide general aviation services, those being Waukesha County-Crites Field and Capitol Airport. Crites Field, owned and operated by Waukesha County, is the larger of the two and can accommodate all types of general aviation aircraft up to and including business and corporate jets. Capitol Airport is a private airport open to public use and provides an important facility for smaller business, personal, and recreational aircraft. The Village of Eagle is also served, for private and recreational aviation, by nearby Palmyra and East Troy municipal airports.

### **Bus Service**

Badger Coaches, Greyhound, Coach USA, and Lamers Bus Lines provide intercity bus service within the Region. Badger Coaches provides daily round trips between Madison, downtown Milwaukee, and Mitchell International Airport. Greyhound has a regional hub in Milwaukee that provides passengers with the opportunity to transfer between buses. Coach USA provides service between Goerke's Corners in Waukesha County and Chicago O'Hare International Airport, as well as Chicago's Midway Airport, with stops in downtown Milwaukee and at General Mitchell International Airport.

### **Waukesha County Bus Transit**

Waukesha Metro Transit oversees the operation of eighteen bus routes that travel throughout Waukesha County and parts of Milwaukee County. Waukesha Metro Transit directly operates ten routes to provide bus service within the City of Waukesha and environs. None of the routes in operation serve the Village of Eagle.

### **Specialized Transportation**

Rideline is a program subsidized by the Waukesha County Department of Senior Services. It provides lift-equipped vans for disabled and older persons. Non-driving Waukesha County residents age 65 and older and individuals under age 65 who use a cane, walker, crutches, wheelchair or scooter, or are legally blind are eligible for this program. Rideline "Seniors on the Go" does provide transportation between communities for an additional fee of \$4.50 per ride for seniors and an unsubsidized rate of \$10 per ride for all others within the Village of Eagle.

### **Ferry Service**

High speed cross Lake Michigan ferry service is provided between Milwaukee and Muskegon, Michigan by Lake Express. This ferry service operates from April to October each year and handles automobiles, small trucks, and passengers. The ferry is approximately 45 miles away from most Village of Eagle residents.

### **Rail Passenger Service**

Intercity passenger rail service in the Region is provided by Amtrak with stops at the downtown Milwaukee Amtrak depot, Mitchell International Airport, and Sturtevant and provides no stops in Waukesha County at this time.

## **PEDESTRIAN AND BICYCLE FACILITIES**

### **Pedestrian Facilities**

A comprehensive inventory of pedestrian facilities, such as sidewalks, has not been completed for communities in Waukesha County. However, SEWRPC developed a pedestrian facilities policy, which applies to Waukesha County, as documented in the bicycle and pedestrian systems element of the 2035 Regional Transportation System Plan. These policies and guidelines are designed in areas of existing or planned urban development to facilitate safe and efficient pedestrian travel within the Region and are documented in Appendix B of the Regional Transportation System Plan.

### **Bikeways**

A “bikeway” is a general term that includes any road, path, or way that may legally be used for bicycle travel. Types of bikeways include “bike paths” which are physically separated from motor vehicle travel, “bike lanes” which are portions of roadways that are designated by striping, signing, and pavement markings for the exclusive use of bicycles; and “shared roadways” which are roadways that do not have designated bicycle lanes, but may be legally used for bicycle travel. A “bike route” is a bikeway designated with directional and information markers, and may consist of a combination of bike paths, bike lanes, and shared roadways. Bikeways are also classified as either “on-street” or “off-street” bikeways. On-street bikeways include bikeways located in a street right-of-way, which include bike lanes, shared roadways signed as bike routes, and bike paths separated from motor vehicle lanes but within the street right-of-way. “Off-street” bikeways are bike paths not located in a street right-of-way. Off-street bikeways are typically located in utility rights-of-way or along rivers or streams, or may serve as short connectors between residential areas and commercial or public facilities.

The bicycle and pedestrian facilities element in the 2035 Regional Transportation System Plan for Southeastern Wisconsin 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 regional plan recommends that as the surface arterial street system of about 3,300 miles in the Region is resurfaced and reconstructed, the provision of accommodation for bicycle travel should be implemented, if feasible, through bicycle lanes, widened outside travel lanes, widened and paved shoulders, or separate bicycle paths. This recommendation would result in an additional 161 miles of on-street bicycle mileage on state, county, and local roads within Waukesha County.

Recommended bikeways in Waukesha County are shown on Map 8-3. The longest current bikeway is the Glacial Drumlin Trail that is owned and managed by the Wisconsin Department of Natural Resources. Developed on a former railroad bed, it extends 51 miles from Waukesha to Cottage Grove in Dane County. The Wisconsin Department of Transportation published a map of bicycling conditions for Waukesha County. This map shows bicycle touring trails, urban escape routes, best roads for biking, and mountain bike trails (See Map 8-3).

Waukesha County currently owns and manages three bikeways within the County. The Bugline Recreation Trail is a 12.2-mile trail located on the former Chicago, Milwaukee, St. Paul, and Pacific Railroad right-of-way. It stretches between Appleton Ave (State Trunk Highway 175) in Menomonee Falls and Main Street (County Trunk Highway VV) in the Village of Merton.

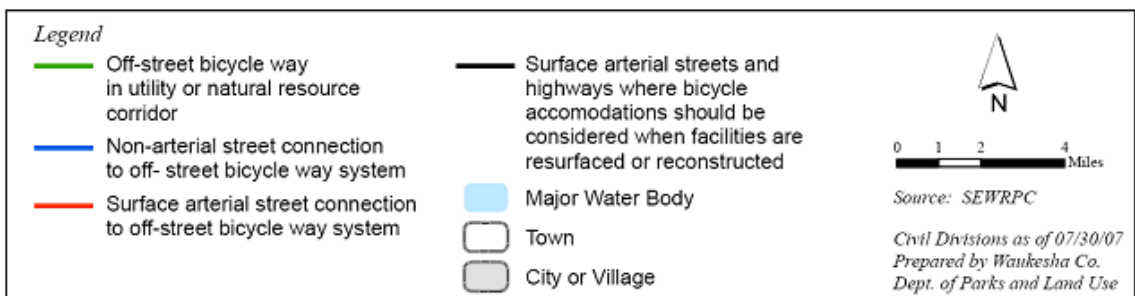
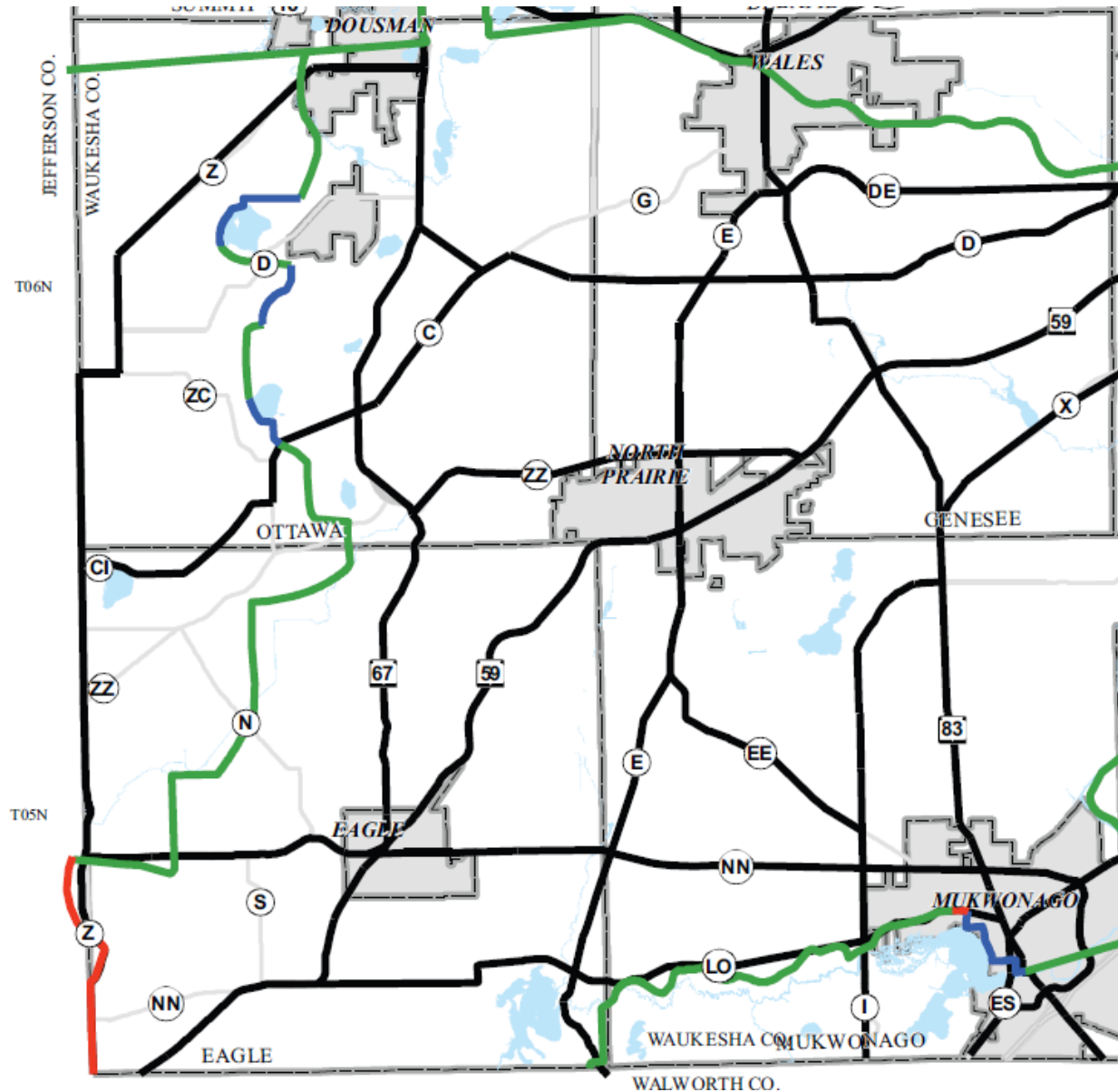
The Lake Country Recreation Trail is located on the former Milwaukee - Watertown Interurban Railway. This 8-mile recreation trail now utilizes the Wisconsin Electric Power Company right-of-way. It stretches between the Landsberg Center trailhead (just north of Interstate Highway 94 on Golf Road, west of County Trunk Highway T) and Cushing Park in the City of Delafield.

The New Berlin Recreation Trail is a 7-mile lineal recreation trail located on the Wisconsin Electric Power Company right-of-way in the City of New Berlin. It extends from South 124th Street just south of Greenfield Ave. (State Highway 59) at the Milwaukee/ Waukesha County Line to Springdale Road in Waukesha.

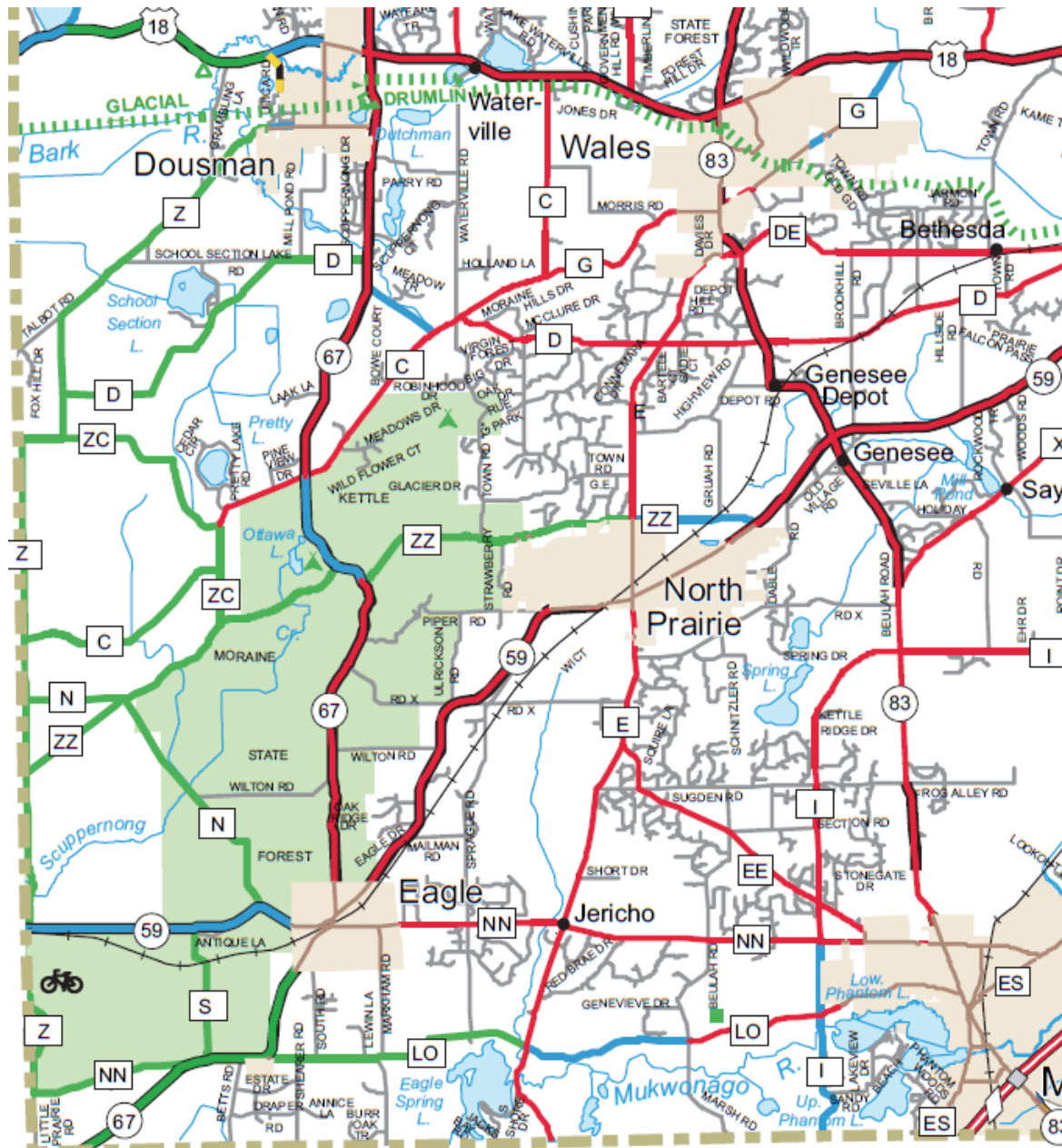


Map 8-3

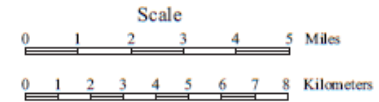
**WAUKESHA COUNTY PROPOSED SYSTEM OF OFF STREET BICYCLE PATHS AND  
SURFACE ARTERIAL STREETS AND HIGHWAY SYSTEM BICYCLE  
ACCOMMODATIONS FOR THE GREATER EAGLE AREA UNDER THE  
RECOMMENDED YEAR 2035 REGIONAL TRANSPORTATION SYSTEM PLAN**



# Map 8-4 BICYCLING CONDITIONS IN THE GREATER EAGLE AREA



## WAUKESHA COUNTY BICYCLING CONDITIONS



See full legend for complete descriptions of road classifications.



Interstate



U.S. Highway



State Highway



County Highway



State Park



Public Campground



County Park with Facilities



County Park without Facilities



Wayside



Mountain Bike Trail



Highway Interchange



Bridge

Unpaved Paved

Town Roads

Best Conditions for Bicycling

Moderate Conditions for Bicycling

Higher Volume, Wider Paved Shoulders

High Volume, Undesirable Conditions

Bicyclists Prohibited

Bicycle Touring Trails

Urban Escape Routes

Major Urban Streets

Local Road with Higher Traffic Volume

Note: paved shoulder information is provided for state highways only.

## **OTHER TRANSPORTATION FACILITIES AND SERVICES**

### **Rail Freight Services**

Railway freight service is provided by four railroad companies in Waukesha County (Map 8-5). These include the Union Pacific Railroad, Canadian National Railroad, Canadian Pacific Railway, and Wisconsin & Southern Railroad Company. All four railroads provide rail freight transportation to Metropolitan Chicago, but only the Wisconsin and Southern Railroad travels through the Village, and has expressed a willingness to provide future railroad spurs to service the Village of Eagle.

Wisconsin & Southern Railroad Co. (WSOR) a regional railroad with headquarters in Milwaukee, operates 700 miles of track (600 owned or leased and 100 in trackage rights) throughout south central Wisconsin and northeastern Illinois. It serves Waukesha, Genesee Depot, North Prairie, and Eagle in Waukesha County. The mission of WSOR is to provide rail freight service to rural communities in southern Wisconsin. In Waukesha County, WSOR operates over publicly owned railroad lines owned by the Wisconsin Department of Transportation and the Wisconsin River Rail Transit Commission.

Between 1990 and 2004, rail freight traffic nearly doubled in Wisconsin exceeding 27.4 billion ton-miles and resulting in over 713 million in revenue. This increase in traffic has resulted in a need to consider additional grade crossing separations at busy intersections and quiet zones where railroad locomotives are prohibited from sounding horns.

### **Rail Intermodal Facilities**

Intermodal facilities are locations where bulk or containerized commodities are transferred from one mode of transportation to another. Intermodal transportation seeks to take advantage of the most cost-effective elements of each individual mode and maximize overall transportation efficiency. In 2004, The Port of Milwaukee is the only truck-rail intermodal facility operating in Southeastern Wisconsin. The 2020 Wisconsin Department of Transportation forecast indicates that six Wisconsin counties have concentrations of the types of commodities that generally indicate the potential for truck-rail intermodal movement (Brown, Dane, Outagamie, Milwaukee, Waukesha, and Winnebago). Nearly two-thirds of this estimate was identified as coming from, or to, Milwaukee and Waukesha counties.

### **Ports and Harbors**

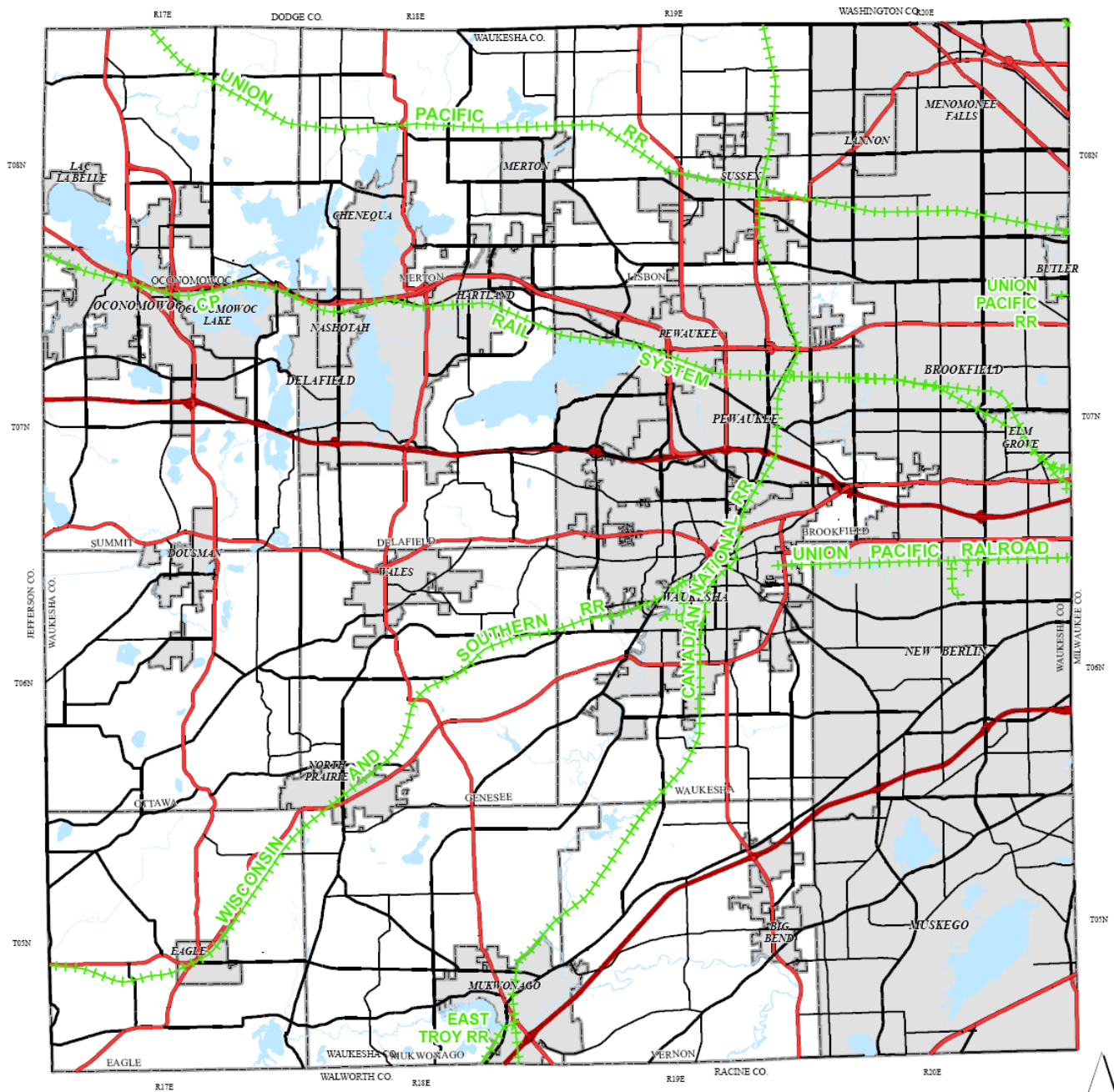
There are no harbors within the County. Water freight and transportation facilities are provided to the planning area by the Port of Milwaukee, which is located approximately 20 miles east of the planning area in the City of Milwaukee. In 2006, the Port of Milwaukee handled over 3.5 million tons of Wisconsin commodities.

### **Airports**

As described earlier in this chapter, Waukesha County is served by two public-use airports. Waukesha County-Crites Field in Waukesha provides chartered air service, airplane rentals, and air freight services. Capitol Airport, Palmyra Airport, and East Troy Airport provide airline facilities for general aviation aircraft. Commercial airline service is provided by General Mitchell International Airport, located in Milwaukee County.

## Map 8-5

### EXISTING RAILROAD ROUTES IN WAUKESHA COUNTY, 2007



#### Legend

- |             |                  |
|-------------|------------------|
| Interstate  | Major Water Body |
| US          | Town             |
| State       | City or Village  |
| County      | Railroads        |
| Local Major |                  |

Source: Waukesha Co. Parks and Land Use

0 1 2 4  
Miles

Civil Divisions as of 04/30/07  
Prepared by Waukesha Co.  
Dept. of Parks and Land Use

## **STATE TRANSPORTATION PROGRAMS**

WisDOT maintains 11,753 miles out of 112,262 miles of the public roads in the State. The State highway system includes approximately 750 miles of interstate freeways and approximately 11,010 miles of state and US-marked highways. Although the state highway system represents only 10.5% of all of the public road mileage in Wisconsin, the State highways carry about 60% of the highway travel or about 35 billion vehicle miles of travel a year. The following programs provide state and federal funds to assist local governments, and are more thoroughly explained in the Waukesha County Comprehensive Development Plan.

### **Corridors 2020**

Corridors 2020 is a part of WisDOT's long-range highway improvement plan designed to provide essential links to key employment and population centers throughout the State. As part of the planning process, Wisconsin's highways were classified based on operational and economic factors. Gaps in the system were identified and improvements scheduled. Since the plan was created in the late 1980's, about 900 miles of new highways have been built to accommodate network needs.

The plan's goal is to complete all backbone improvements, which will connect all communities with a population of 5,000 or more to the State highway system.

### **Airport Improvement Program**

The Airport Improvement Program, administered by WisDOT's Bureau of Aeronautics, combines federal, state and local resources to help fund improvements for nearly 100 public-use airports throughout the state.

### **Freight Rail Infrastructure Improvement Program**

Freight Rail Infrastructure Improvement Program (FRIIP) loans are awarded to private industries, railroads, and local governments to improve rail infrastructure and to construct new rail-service facilities. The overall goal is to boost economic development and jobs, and increase the use of rail service.

### **Freight Rail Preservation Program**

The Freight Rail Preservation Program (FRPP) provides grants to local units of government, industries and railroads for the purpose of preserving essential rail lines and rehabilitating them following purchase.

### **Midwest Regional Rail Initiative**

The Midwest Regional Rail Initiative (MWRRI) is a joint venture between nine state transportation departments (Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Nebraska, Wisconsin, and Ohio), the Amtrak rail system and the Federal Railroad Administration. This 3,000 mile rail system with Chicago as its hub would connect the cities of Cleveland, Cincinnati, Detroit, Milwaukee, Minneapolis, St. Louis and Omaha at speeds of up to 110 miles per hour.

### **Transportation Economic Assistance Program**

The Transportation Economic Assistance (TEA) Program is a rapid response grant program designed to create new employment and to retain existing employment and to encourage private investment in Wisconsin.



### **Congestion Mitigation and Air Quality Improvement Program**

The Congestion Mitigation and Air Quality Improvement program (CMAQ) is a federally funded initiative to encourage transportation alternatives that improve air quality. It includes efforts to enhance public transit, bicycle/pedestrian facilities, ridesharing programs and facilities, and technologies that improve traffic flow and vehicle emissions.

### **Disadvantaged Business Enterprise Program**

The Disadvantaged Business Enterprise (DBE) Program's goal is to increase participation of firms owned by disadvantaged individuals in all federal aid and state transportation facility contracts. The DBE program strives to ensure a level playing field and foster equal opportunity for firms owned and operated by disadvantaged individuals on USDOT-assisted contracts and procurements.

### **Wisconsin Highway Improvement Program**

The Wisconsin Highway Improvement Program currently invests over \$750 million each year, resulting in over 565 miles of roads improved and rehabilitated annually. The program addresses deficiencies in the highway and bridge system and incorporates needed new improvements to increase the safety and mobility of the system.

### **In This Together Program**

“In This Together” is a WisDOT program that targets statewide businesses facing road construction in their community. The program’s goal is to help businesses maintain business while construction is underway.

### **Local Transportation Enhancements Program**

The U.S. Congress created the Transportation Enhancements (TE) Program in 1991 to address growing concerns about air quality, open space, and traffic congestion. This program is the first Federal initiative to focus on enhancing the travel experience and fostering the quality of life in American communities.

### **Rustic Roads Program**

The Rustic Roads Program was created in 1973 by the State Legislature to preserve what remains of Wisconsin’s scenic, lightly traveled back roads for the enjoyment of motorists, hikers and bicyclists. Wisconsin is unique in its efforts to preserve these low volume, low function rural roads. Waukesha County has two designated roads in the Wisconsin Rustic Roads Program. The first road is a paved 2.5 mile curving trail on the narrow isthmus between Upper and Lower Nashotah Lakes and runs south past Upper Nemahbin Lake. It includes portions of County Trunk Highway B and Mill Road. The second rustic road within the County includes portions of Waterville Road and Piper Road, from US Highway 18 to Wisconsin State Trunk Highway 59, in the Town of Eagle. It is a 7 mile paved road that provides scenic views of the Southern Unit of the Kettle Moraine State Forest and access to the Ice Age Trail. In addition, several local municipalities within the County maintain roads as rustic within their communities.

### **Scenic Byways Program**

The purpose of the national scenic byways program is to recognize and promote some of America's memorable roads for the enjoyment of the traveling public. The goal of the Wisconsin Scenic Byways program is to identify, designate, promote and preserve a system of State Trunk Highways recognized for their outstanding scenic views and ability to offer travelers an exceptional travel experience. These byway corridors highlight the best scenic resources along with the natural, historic, archeological, cultural and recreational opportunities available in Wisconsin. It is anticipated that this program will promote tourism and economic development by encouraging people to visit the route and spend money at local motels, restaurants and tourist attractions.

### **Tourist Oriented Directional Sign Program**

The Tourist Oriented Directional Sign (TODS) Program provides signs with directional information for qualifying tourist-related businesses, services or activities. TODS supports the tourism industry's effort to promote businesses and economic development in Wisconsin.

### **Transit Assistance Programs**

The purpose of the State's public transit programs is to financially support the 26 urban bus and 43 shared-ride taxi operating systems located throughout Wisconsin.

## **OBJECTIVES, PRINCIPLES AND STANDARDS**

### **Transportation Objective**

A multi-modal transportation system which, establishes appropriate types and choices of transportation modes, that through its location, capacity, and design, will effectively serve the existing Village and County land use pattern and promote the implementation of the regional land use plan. The County comprehensive development plan and the Village of Eagle's Comprehensive Development Plan meet and manage the anticipated travel demand generated by the existing and proposed land uses.

### **Principle**

A multi-modal regional transportation system is necessary to provide transportation service to all segments of the population and to support and enhance the economy and quality of life. The arterial street and highway system serving personal travel by automobile and freight travel by truck is, has been, and will likely continue to be the dominant element of the transportation system carrying over 90 % of total daily travel, and serving the overwhelming majority of the population. However, there are substantial reasons for a multi-modal regional transportation system, including public transit and bicycle-pedestrian elements. Moreover, in the most heavily traveled corridors, public transit and bicycle and pedestrian facilities can alleviate peak travel loadings on highway facilities and the demand for land for parking facilities. Also, a multi-modal transportation system can support and enhance the quality of life and economy by providing a choice of modes.

### **Standards**

1. The transportation system should be consistent with and serve to support, and promote the implementation of the land use plan.
  - a. Higher relative transportation accessibility should be provided to areas recommended for development than to areas not recommended for development;
  - b. Improvements in accessibility should be provided to areas recommended for development rather than to areas not recommended for development.
2. Arterial Street and Highway System
  - a. A grid of arterial streets and highways should be provided in urban areas of the Region at intervals of no more than one-half mile in each direction in urban high-density areas, at intervals of no more than one mile in each direction in urban medium-density areas, and at intervals of no more than two miles in each direction in urban low-density and suburban-density areas. In rural areas, arterials should be provided at intervals of no less than two miles in each direction.
  - b. In urban areas of the Village the grid of arterial streets should be direct and understandable.
  - c. Arterial street and highway facilities should be provided with adequate traffic-carrying capacity to minimize traffic congestion. Design capacity is the maximum level of traffic volume a facility can carry before beginning to experience morning and afternoon peak traffic hour traffic congestion, and is expressed in terms of number of vehicles per average weekday.

Design capacity and level of congestion thresholds are set forth in the following table:

**Table 8-3**  
**AVERAGE WEEKDAY TRAFFIC VOLUME**

Facility Type	Average Weekday Traffic Volumes (vehicles per 24 hours)			
	Design Capacity and Upper Limit of Level of Service C	Upper Limit of Moderate Congestion and Level of Service D	Upper Limit of Severe Congestion and Level of Service E	Extreme Congestion and Level of Service F
Standard Arterial				
Two-lane	14,000	18,000	19,000	> 19,000
Four-lane Undivided	18,000	23,000	24,000	> 24,000
Four-lane w/ Two-way Left Turn Lane	21,000	29,000	31,000	> 31,000

*a*Design capacity is the maximum level of traffic volume a facility can carry before beginning to experience morning and afternoon peak traffic hour traffic congestion, and is expressed in terms of number of vehicles per average weekday.

Source: SEWRPC

The level of congestion on arterial streets and highways may be summarized by the operating conditions in the following table.

**Table 8-4**  
**TRAFFIC OPERATING CONDITIONS**

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 is unimpeded. Control delay at signalized intersections is minimal.
None	C	50 to 70% 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 percent of free-flow speed	Significant restrictions on lane changes. Traffic flow approaches instability.
Extreme	F	25 to 33 percent of free-flow speed	Flow at extremely low speeds. Intersection congestion with high delays, high volumes, and extensive queuing.

Source: SEWRPC

### 3. Bicycle and Pedestrian Facilities

- a. All arterial streets and highways (including their bridge and underpass facilities) should provide accommodation for bicyclists upon construction or reconstruction, or for arterial facilities having a rural cross-section if possible, when resurfaced.
- b. A regional system of off-street bicycle paths should be provided in accordance with the recommendations set forth in an adopted park and open space plans. These off-street bicycle paths should provide reasonably direct connections between the urban areas and communities on safe and aesthetically attractive routes with separation from motor vehicle traffic.
- c. The detailed planning objectives and standards for bicycle and pedestrian facilities are documented in SEWRPC Planning Report No. 43, A Regional Bicycle and Pedestrian Facilities System Plan for Southeastern Wisconsin: 2010.



## **VILLAGE IMPLEMENTATION RECOMMENDATIONS**

1. The Village of Eagle should support Waukesha County's work with the Southeastern Wisconsin Regional Planning Commission (SEWRPC) to conduct a major review and reevaluation of the jurisdictional transfer recommendations in the year 2035 Regional Transportation System Plan.
2. The Village of Eagle should participate in any of Waukesha County's work to refine the proposed system of off street bicycle paths and surface arterial streets and highway system accommodation of bicycles contained in the 2035 Regional Transportation System Plan. In addition, the Village should consider integrating bikeway accommodations into planning for upgrades and modifications to the Village roadway system consistent with the refined County Plan, and facilitate communication with local municipalities to address bikeway linkages and connectivity.
3. The Village should implement the transportation system development planning objectives, principles, and standards contained in Chapter 3, of the Village of Eagle Comprehensive Development Plan.
4. The Village should support County evaluation of dedicated funding sources for county wide shared taxi service to meet the needs of a growing elderly population in all 37 municipalities.
5. As a consequence of increasing rail freight traffic, the Village should support County establishment of additional rail quiet zones and their investment in railroad grade separations as a safety priority at county trunk highway crossings.
6. The Village should continue to evaluate for implementation any public transit recommendations contained in the 2035 Regional Transportation System Plan for Southeastern Wisconsin that are possible at the local level.
7. The Village should continue to update the Village's Official Map.
8. The Village should continue to work to upgrade the Village's street system with the necessary improvements.
9. The Village should look for possible State and Federal funding sources or grants for road improvements.

## **IMPLEMENTATION RECOMMENDATIONS OF THE 2035 REGIONAL TRANSPORTATION PLAN**

The 2035 Regional Transportation System Plan for Southeastern Wisconsin is multi-modal in nature, dealing with public transit, bicycle and pedestrian, travel demand management, transportation systems management, and arterial streets and highways. The plan is designed to serve, and be consistent with, the Year 2035 Regional Land Use Plan.

The recommendations set forth below are based upon inventory data, adopted recommendations, a regional public participation survey, and transportation development objectives, principles, and standards in Chapter 2 of the Waukesha County Comprehensive Development Plan.

### **Arterial Street and Highway System Functional Improvements**

The 2035 Regional Transportation System Plan for Southeastern Wisconsin identifies recommended functional improvements to the arterial street and highway system in Waukesha County (Map 8-6). These recommendations are divided into three categories: system preservation - the proposed resurfacing, reconstruction, and modernization as needed of arterials to largely the same capacity as exists today; system improvement - the proposed widening of existing arterials to carry additional traffic lanes; and system expansion - the proposed construction of new arterial facilities (Table 8-5).

**Table 8-5**

### **ARTERIAL STREET AND HIGHWAY PRESERVATION, IMPROVEMENT, AND EXPANSION BY ARTERIAL FACILITY TYPE IN WAUKESHA COUNTY: YEAR 2035 REGIONAL TRANSPORTATION SYSTEM PLAN**

	<b>System Preservation (Miles)</b>	<b>System Improvement (Miles)</b>	<b>System Expansion (Miles)</b>	<b>Total Miles</b>
Freeway	32.2	26.5	0.0	58.7
Standard Arterial	617.9	100.1	10.6	728.6
Total	650.1	126.6	10.6	787.3

*Source: SEWRPC*

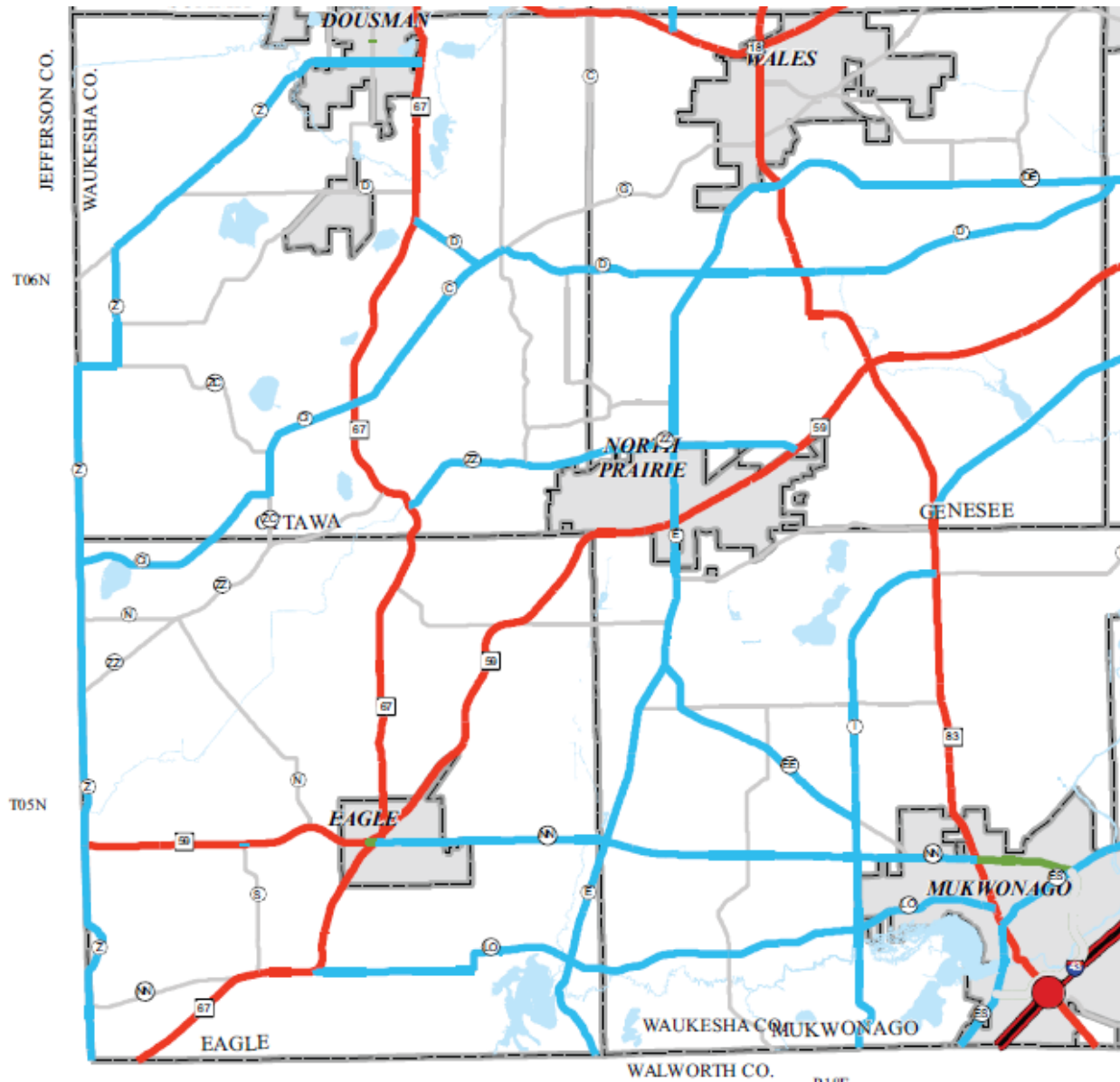
### **Jurisdictional Recommendations**

Jurisdictional classification establishes which level of government – state, county, or local – has or should have, responsibility for the design, construction, maintenance, and operation of each segment of the total street and highway system. Jurisdictional classification is intended to group all streets and highways logically into subsystems under the jurisdiction of given level of government.

Upon completion of the initial regional transportation system plan in 1966, detailed county jurisdictional highway system plans were prepared. These plans were extended in design year and updated as part of the year 2000 Regional Transportation System Plan completed in 1978, the year 2010 plan completed in 1994, and adopted in 1995 by the Waukesha County Board of Supervisors. The recommended Waukesha County jurisdictional arterial street and highway system for the year 2035, based upon the extension of the year 2020 plan within refinements, to the year 2035, is shown on Map 8-7.

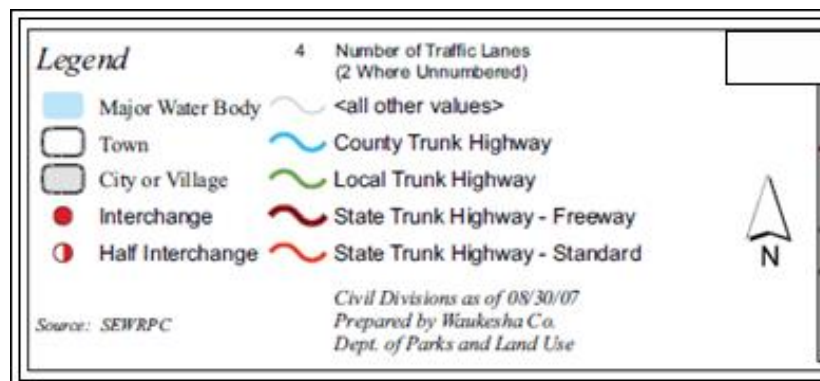
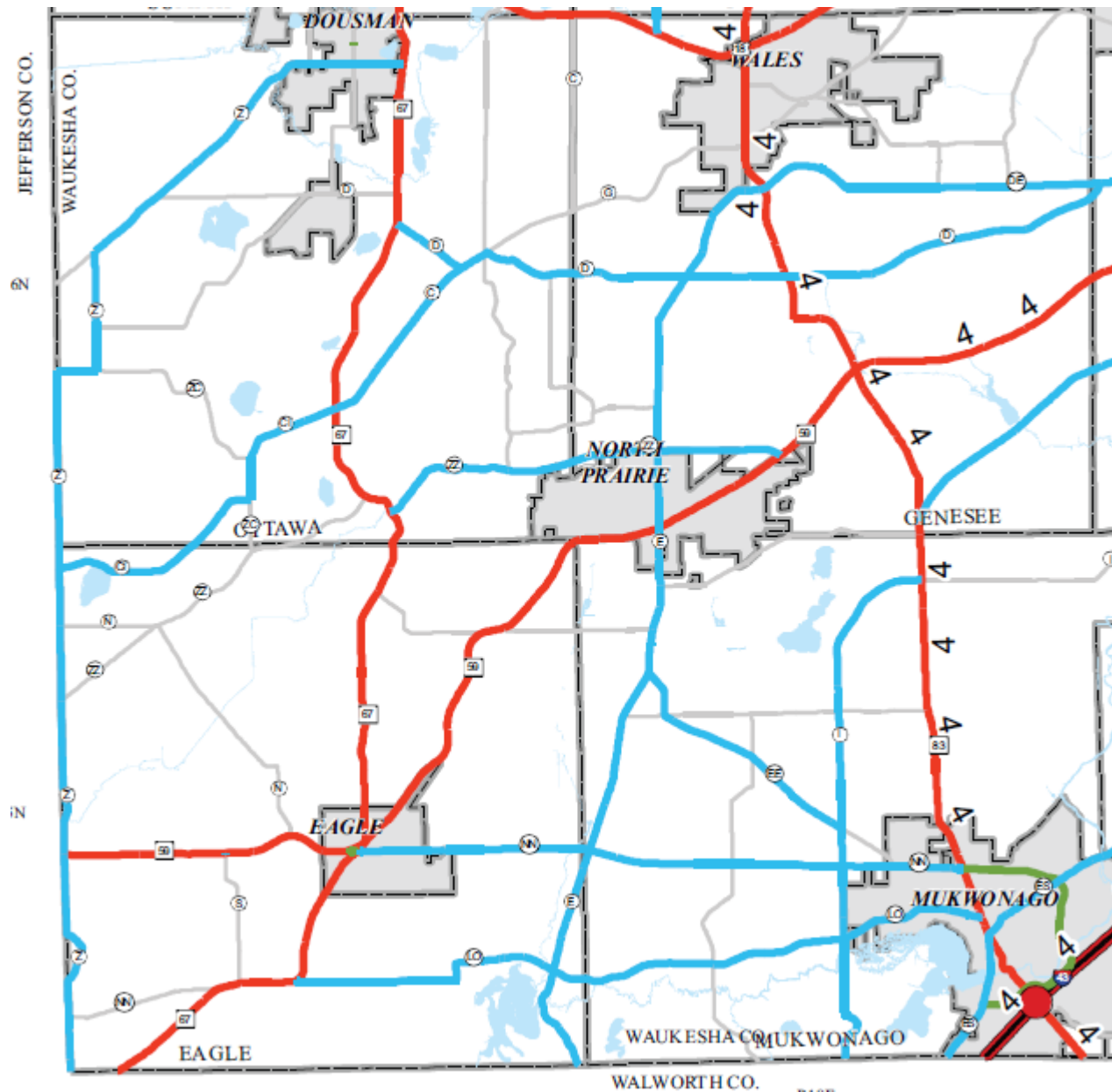
Map 8-6

**RECOMMENDED FUNCTIONAL IMPROVEMENTS TO THE ARTERIAL STREET  
AND HIGHWAY SYSTEM IN THE GREATER EAGLE AREA: UNDER THE 2035 REGIONAL  
TRANSPORTATION SYSTEM PLAN**



Map 8-7

**RECOMMENDED JURISDICTIONAL HIGHWAY SYSTEM PLAN  
FOR THE GREATER EAGLE AREA: 2035**

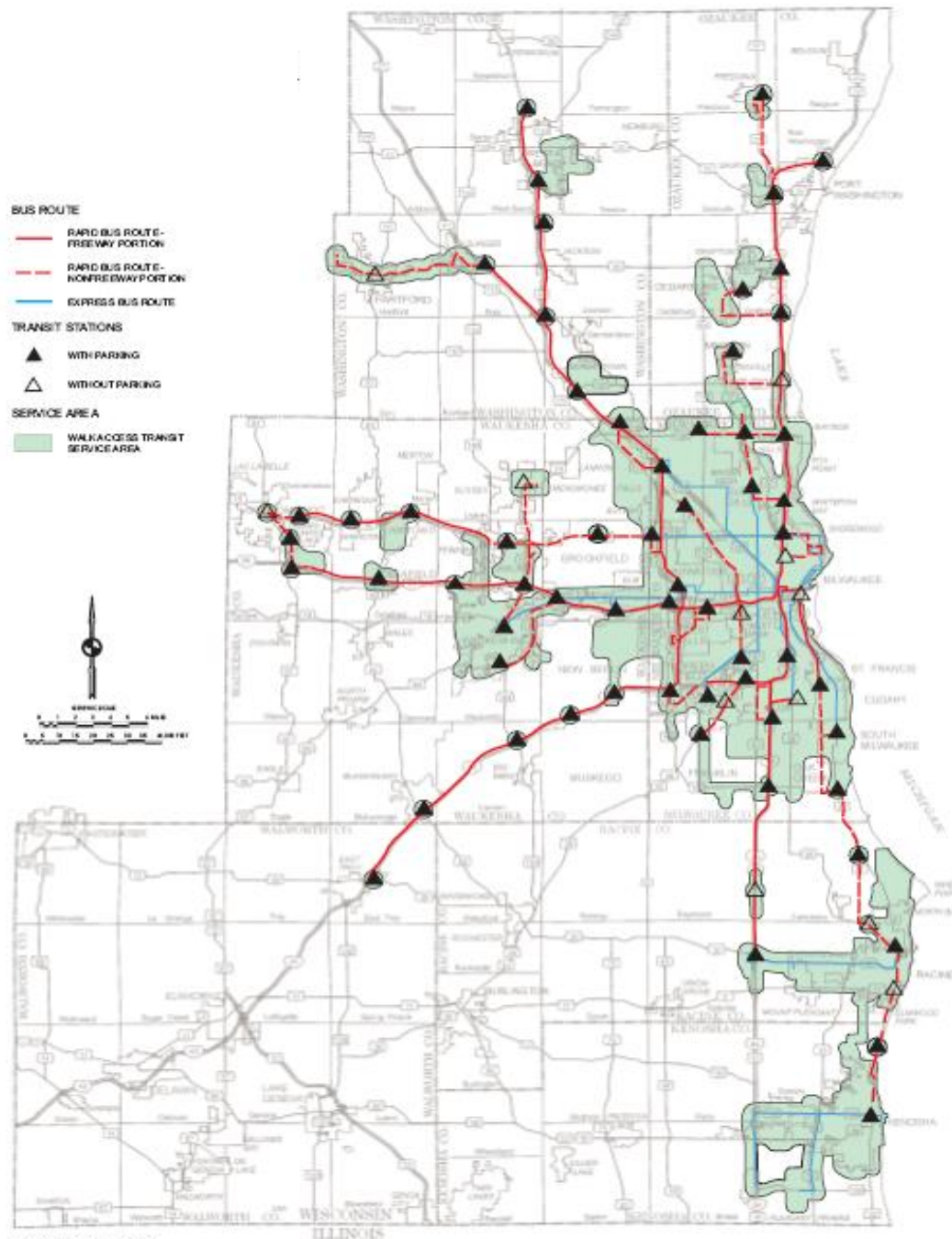


## Public Transit

The public transit element of the final recommended regional 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 proposed rapid and express transit services. Map 8-8 displays the transit system proposals for each of the three transit system components.

Map 8-8

### RECOMMENDED PUBLIC TRANSIT ELEMENT OF THE 2035 REGIONAL TRANSPORTATION SYSTEM PLAN



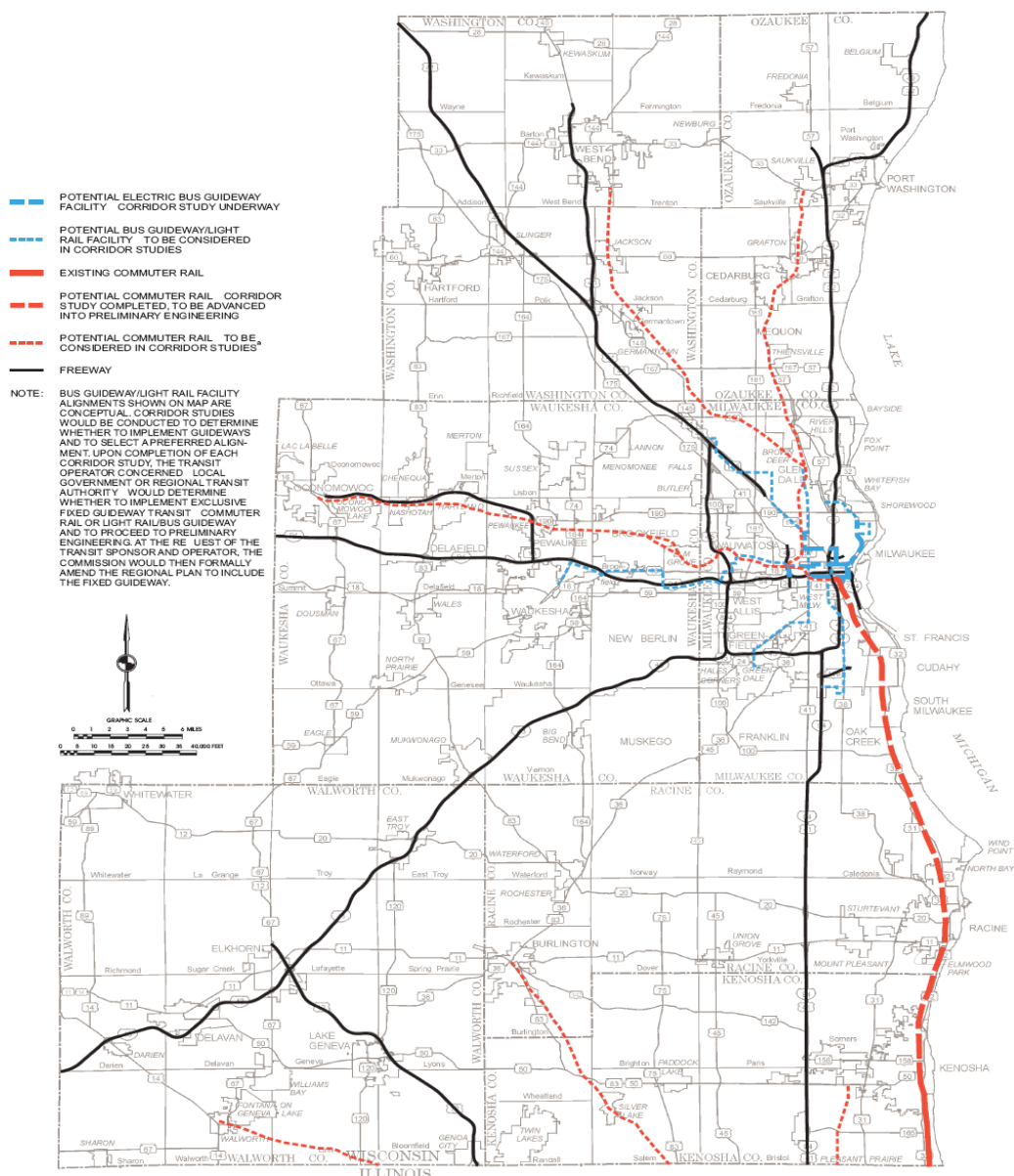


## Upgrading to Rail Transit or Bus Guideways

The regional transportation plan also proposes that consideration be given to upgrading the recommended rapid and express bus transit services to commuter rail for rapid transit service and light rail or bus guideways for express transit service. The regional transportation plan suggests four future commuter lines and six light rail lines within the Region as shown on Map 8-9. In Waukesha County, the plan identifies a potential commuter rail corridor and a potential light rail corridor that would connect Waukesha County communities with Central Milwaukee County and UW-Milwaukee. Special corridor studies would be conducted to determine whether to implement fixed guideway transit in these corridors and to refine the alignments shown in the Regional plan.

Map 8-9

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



\*Corridor feasibility studies have been completed for the Chicago-based commuter rail extensions to the Village of Walworth in Walworth County and the City of Burlington in Racine County. The conclusion of the Walworth extension study was that it was potentially feasible and cost-effective, but should be deferred and considered again when a Metra extension from its current terminus in Fox Lake, Illinois is considered to Richmond, Illinois near the Wisconsin-Illinois Stateline. The conclusion of the Burlington extension study was that it was not feasible or cost-effective at that time, but could be considered again in the future.

Source: SEWRPC.

### **Bicycle and Pedestrian Facilities**

The bicycle and pedestrian facilities element in the 2035 Regional Transportation System Plan for Southeastern Wisconsin 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 regional plan recommends that as the surface arterial street system of about 3,300 miles in the Region is resurfaced and reconstructed, the provision of accommodation for bicycle travel should be implemented, if feasible, through bicycle lanes, widened outside travel lanes, widened and paved shoulders, or separate bicycle paths. This recommendation would result in an additional 161 miles of off-street bicycle mileage on state, county, and local roads in Waukesha County as shown on Map 8-3, 8-10 and 8-11.

### **Community Bicycle and Pedestrian Plans**

SEWRPC proposes that local units of government prepare community bicycle and pedestrian plans to supplement the regional plan. The local plans should provide for facilities to accommodate bicycle and pedestrian travel within neighborhoods, providing for convenient travel between residential areas and shopping centers, schools, parks, and transit stops within or adjacent to the neighborhood. The standards, guidelines, and system plans set forth in the regional plan should be the basis for the preparation of community and neighborhood plans. It is also recommended that local units of government consider the preparation and implementation of land use plans that encourage more compact and dense development patterns, in order to facilitate pedestrian and bicycle travel. Local municipalities within Waukesha County as well as adjacent counties may also have numerous parks and recreation plans that incorporate bicycle and pedestrian pathways, and several have already developed bicycle and pedestrian plans. These plans should also recognize what jurisdiction is responsible for said trails. These are discussed further in Chapter 3. Since many trails cross municipal boundaries, Waukesha County should work with municipalities and adjoining counties to coordinate trail planning.

### **Transportation Systems Management**

The transportation systems management element of the final 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. In addition, improving the overall operation of the regional transportation system requires regional cooperation and coordination between government agencies, and operators.

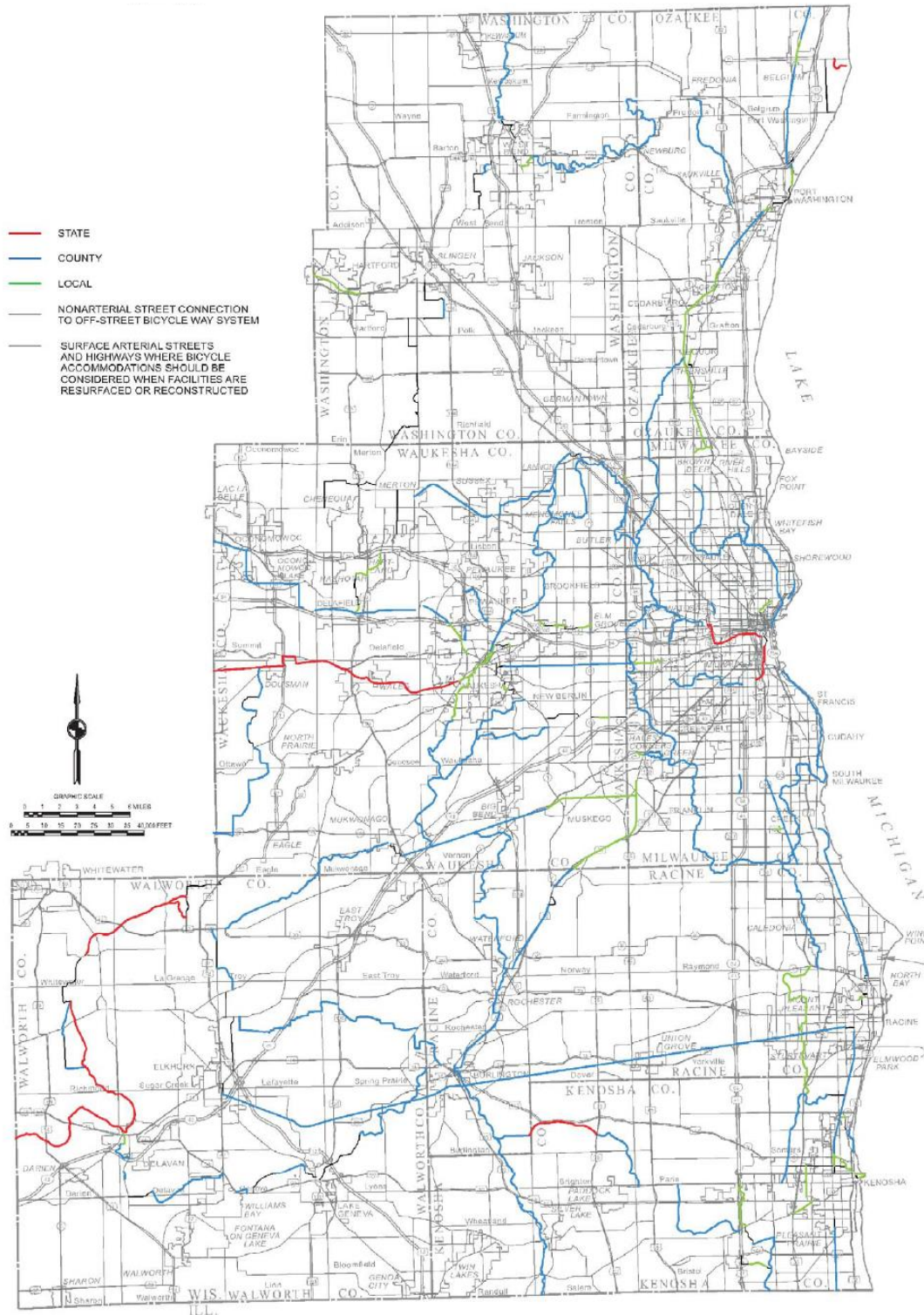
### **Travel Demand Management**

The travel demand management measures included in the final 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 discussed.

Seven categories of travel demand management measures are recommended in the year 2035 Regional Transportation 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 activity center land use plans. For more information on these categories see pages 384 to 387 in the SEWRPC Planning Report No. 49, A Regional Transportation System Plan For Southeastern Wisconsin: 2035.

## Map 8-10

# RECOMMENDED OFF-STREET BICYCLE FACILITY JURISDICTION UNDER THE 2035 REGIONAL TRANSPORTATION SYSTEM PLAN



Source: SEWRPC.



Map 8-11

**RECOMMENDED OFF-STREET BICYCE FACILITY JURISDICTION  
IN THE GREATER EAGLE AREA  
UNDER THE 2035 REGIONAL TRANSPORTATION SYSTEM PLAN**



- STATE
- COUNTY
- LOCAL
- NONARTERIAL STREET CONNECTION TO OFF-STREET BICYCLE WAY SYSTEM
- SURFACE ARTERIAL STREETS AND HIGHWAYS WHERE BICYCLE ACCOMMODATIONS SHOULD BE CONSIDERED WHEN FACILITIES ARE RESURFACED OR RECONSTRUCTED

Source: SEWRPC



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