

Chapter 4 – Existing Infrastructure

Adequate public and private infrastructure and transportation systems are essential for community businesses to grow and thrive. These structures and facilities include the transportation network of roads, rail, and other means of moving people and goods, as well as the public and private utility systems for water and sewer, power, and telecommunications. The availability of industrial and business park space as well as sites for redevelopment are also identified in this chapter.

Transportation

The Regional surface transportation network is comprised of federal, state, county and local roadways. The inventory covers over 18,500 miles of road, including 445 miles of Interstate and U.S. highways, 1,211 miles of state highways, 2,843 miles of county highways and over 13,000 miles of local streets and roads. There are also nearly 1,000 miles of other miscellaneous roads, which are forest roads, fire lanes, and other roads not used for general travel purposes. Where jurisdictions overlap, the mileage is counted toward the higher class to avoid overstating the total miles of pavement within the system. The Region's transportation network is shown in **Map 2**.

Interstate and Federal Highways

The Region is served by a number of Interstates and Federal Highways. Interstates and Federal Highways within the Region primarily serve as principal arterial roads, with the exception of USH 12 which serves as a two-lane minor arterial and alternate route for I-90/94. Interstates and Federal Highways serving the Region are listed below:

- **I-39** – A major north-south route connecting the Region with Madison, and Milwaukee and Chicago via I-90/94
- **I-90/94** – A major east-west route connecting the Region to Eau Claire, Minneapolis, Milwaukee, and Chicago
- **USH 8** – A major east-west route that connects the Northwoods and the Twin Cities
- **USH 10** - A major east-west route that connects the Region with the Twin Cities and Fox Valley
- **USH 12** – An east-west route that serves as an alternate route for I-90/94
- **USH 45** – A major north-south route that parallels USH 51 and travels through Antigo, eastern Oneida County, and Eagle River
- **USH 51** – A major north-south artery that connects the Northwoods with I-39 and Madison, Milwaukee, and Chicago

State Highway System

The Region is also served by a number of state trunk highways (STH). These are primarily two-lane routes with some four-lane urban sections that serve as minor arterials. Two significant exceptions include STHs 29 and 54, as STH 29 is a major east-west connection that serves as a principal arterial in its entirety, while the major section of STH 54 is a four-lane connecting Wisconsin Rapids to I-39 and Stevens Point.

The Region's highways are a significant component of freight flow supporting the Region's economy. The principal truck routes within the Region are primarily U.S. and state highways linking the Region's main economic centers with the rest of the state and the nation. Local truck routes often branch out from these major corridors to link local industry with the main truck routes as well as for the distribution of commodities within the local area. Mapping these local routes is beyond the scope of this study, and local issues such as safety, weight restriction and noise impacts play significant roles in the designation of local truck routes.

Major State Highway connections serving the Region include:

- **STH 13** – A major north-south route serving areas of the Region without direct Interstate access
- **STH 21** – An east-west route traveling through Adams and Juneau Counties
- **STH 29** – A major east-west route connecting the Region with Green Bay to the east and the Twin Cities to the west
- **STH 34** – A north-south route that connects Wausau and Wisconsin Rapids
- **STH 47** – A north-south route that runs through Langlade, Oneida, and Vilas Counties and connects the Region with the Fox Valley
- **STH 52** – An east-west route connecting Wausau and Wabeno traveling through the City of Antigo
- **STH 54** – An east-west route connecting the Region with Green Bay to the east and the Mississippi River to the west
- **STH 55** – A north-south route that carries traffic through Langlade County, Forest County, and the City of Crandon
- **STH 64** – An east-west route traveling through Langlade and Lincoln Counties
- **STH 70** – An east-west route traveling across northern Forest and Oneida Counties and southern Vilas County
- **STH 80** – A north-south route that runs through Juneau and Wood Counties
- **STH 82** – An east west route traveling through Adams and Juneau Counties

County and Local Roads

An extensive network of county trunk highways (CTH) connects the Region's rural areas. These are classified as collector roads, and they serve as major traffic collectors from rural land uses and distribute the traffic to the arterial system. County trunk highways serve an important role in linking the Region's agricultural and forestry resources to the Region's cities and major highways. In addition, local roads, including municipal streets and town roads, provide access to local land uses like residential, commercial/industrial, and recreational areas.

Transit

Municipalities, Counties, and Metropolitan Planning Organizations (MPOs) administer several transportation options such as fixed bus routes, shared ride taxis, senior transportation, and ADA-accessible transportation. In addition to regular public transit, specialized transit services for the elderly and disabled are provided by each county in the Region. Intercity bus service is available in parts of the region, including Stevens Point, Wausau, and Wisconsin Rapids. Service is provided by Jefferson and Lamers Bus Lines. Connections can be made to Green Bay, Chicago, and Minneapolis, and other places nationwide.

Airports

Airports are critical to economic development. Within the region there are 19 public use airports, including two commercial airports. Central Wisconsin Airport is in the center of the region in Mosinee and the Rhinelander - Oneida County Airport is in the northern part of the region. These two airports are critical for the continued growth of the Region. Combined, the two commercial airports serving the Region had over 14,000 aircraft operations in 2021.

Railroads

Fox Valley & Lake Superior, Canadian National, Union Pacific, and Canadian Pacific Kansas City operate rail lines in the Region. NCWRPC is a member of the Northwoods Rail Transit Commission, an organization dedicated to improving rail service for northern Wisconsin and Upper Michigan. Railroad infrastructure within the Region is shown in **Map 2**.

The need for access to reliable rail service has been identified by local leaders and businesses in parts of our Region. The decline of rail service in northern Wisconsin has had a negative impact on manufacturers and loggers in the Region. North Central Wisconsin Regional Planning Commission assisted local leaders throughout northern Wisconsin, and they formed the Northwoods Rail Commission in 2012. The commission consists of several counties in both Wisconsin and Michigan. The mission of the Northwoods Rail Commission is to sustain and enhance safe, reliable, and efficient rail service critical to the businesses, communities, and economies in northern Wisconsin.

Bicycle and Pedestrian Facilities

With the importance of Tourism to the Regional economy, bicycle and pedestrian facilities are another important transportation consideration. The Region has an extensive network of bicycle and pedestrian infrastructure; including the 400, Bearskin, Elroy-Sparta, Green Circle, Hillsboro, Mountain-Bay, Nicolet, Tomorrow River, and Wolf River State Trails that are managed by the WI DNR, the Ice Age National Scenic Hiking Trail traversing the Region, and numerous locally managed trail systems located throughout the Region. **Map 3** shows State Trails, the Ice Age National Scenic Trail, and notable local trail systems located throughout the Region. **NCWRPC's 2018 Regional Bicycle & Pedestrian Plan** contains a map of existing and recommended bicycle and pedestrian infrastructure throughout the Region.

Utilities

Utilities that directly impact economic development include water & wastewater facilities, energy facilities, and telecommunications networks. The status of each within the Region is examined below:

Water & Wastewater Facilities

Water and wastewater are among the most basic and fundamental municipal services. There are 59 municipal water systems in the Region, including ten systems that did not exist in 1978. Just over half of these systems are in the more urbanized area of the central sub-Region. Ten systems are in Juneau County, and 16 are in the five northern counties. Currently there are 70 municipal wastewater treatment systems in the Region. This is an increase of 12 since 1978. Over half of these systems (36) are in the three central counties. It would be expected that a high percentage of these facilities would be in the most urbanized areas.

Energy Facilities

The energy system within North Central Wisconsin includes the Weston power plant and several hydroelectric dams. Power is distributed via a system of high voltage power lines. The Weston Power Plant site includes four separate plants that generate 525-megawatts of electricity for WPS. There is also a biomass fueled cogeneration power plant in Rothschild, collocated with a paper mill and was built to create 50-megawatts of electricity. Along the Wisconsin River there are 15 hydroelectric dams that produce electricity. A system of high voltage lines then moves the electricity from the source out to customers throughout the Region. The high voltage power lines generally follow major roads throughout the Region and connect areas with a higher concentration of population. In addition, power is moved in and out of the Region on the national power grid.

Natural gas is another important energy source for both business and residential needs. Within the Region the primary natural gas pipeline, operated by ANR, is known as the Tomahawk Lateral. This facility consists of two 8-inch pipes running from Stevens Point north. The line is connected from the Fox Cities area and runs through the Region to Goodman and into Michigan. According to energy providers, the line is at capacity. Communication with the pipeline operators and planners is critical for showing future demand for natural gas. Facility expansion to increase capacity is important to the Region.

Telecommunications

As mentioned earlier, access to the internet is critical in today's economy, as the ability to connect to the internet is essential for both business and personal use. Access to reliable broadband helps create job opportunities through means such as telecommuting and will increase rates of entrepreneurial business formation in rural areas. Tourism and related industries have a considerable impact on the business makeup of the Region, and these businesses would see an increase in business due those travelers who would extend their stay because they can conduct their business from anyplace. In addition to economic impacts, increased access to broadband will improve access to vital basic services such as health care, government, and financial services. This places a premium on having the infrastructure in place that can support a robust broadband network throughout the Region.

Much of the investment in infrastructure has been in fiber optics to bring broadband access to consumers, but what has been missing from the system is a method to bring direct access to this new network of high-volume lines directly into the home or business of the final user: the so-called "last mile". Options such as satellite and cellular data providers can help bridge this gap, but at this point this last mile poses an obstacle to full broadband access for many consumers, especially in rural areas in our Region.

As previously mentioned, about 76 percent of broadband serviceable locations throughout the Region had access to reliable broadband services (service providing download/upload speeds of at least 100/20 Mbps) in 2024. As the FCC's method of measuring broadband coverage throughout the nation has recently changed, making direct comparisons for how access has improved is difficult, but observing the rapidly increasing broadband subscription rates experienced throughout the Region suggests that broadband coverage throughout the Region is also rapidly improving.

The development of broadband access in Wisconsin has been aided by a statewide initiative, sponsored by the Public Service Commission of Wisconsin (PSC), to promote the availability and sustainable adoption of broadband internet access. The effort provides grant funding to promote both the availability and reliability of high-speed Internet to improve economic opportunity and quality of life. The initiative is funded through a federal grant, as well as in-state matching funds and in-kind services. The PSC's **Wisconsin Broadband Map** shows broadband coverage throughout Wisconsin, while the FCC's **National Broadband Map** also shows broadband coverage throughout the State.

Business & Industrial Parks

Business and/or industrial parks are important assets to both the local community and the Region. There are 69 identified business and/or industrial parks within the Region. The parks are essentially an area of land that are “ready-to-build” industrial/business sites. All necessary infrastructure improvements are in place to allow a business to construct and operate with minimal difficulty. The NCWRPC recently completed the **North Central Region Industrial Park Inventory, Absorption, and Needs Study**, which contains an inventory of all business and industrial parks located throughout the Region. This study also lists the known characteristics of each industrial park, including access to municipal water, sewer, gas, electricity, and rail, whether the park is in a Tax Incremental Financing District (TID) or not, known internet download and upload speeds, and which highways access the park. Statewide maps for utility providers, broadband and cell signal coverage, and rail and highway access are available online from various state agencies. They are continually updated as infrastructure expands, changes ownership, or is modified.

Every county in the Region has at least one industrial and/or business park, while there are 20 in Marathon County. The majority of these spaces are located in the central and south sub-Regions. In all, these parks include nearly 11,000 acres of business and industrial land, of which over 6,600 acres have been developed, nearly 3,000 acres are available for development without restrictions, and an additional 1,330 acres have not yet been developed but have development restrictions.

Overall, the Region has about a 29-year supply of industrial park lots; however, there may be a shortage of larger lots or lots in parks in the most ideal locations that a specific business may desire. For example, Oneida County only has 2 acres total as of 2020, making it difficult for local businesses to expand. On the other end of the spectrum, Vilas County has an estimated 91 to 210 years’ worth of industrial acreage. But as nearby counties run low on available lots, the growth rate in Vilas County may accelerate in the 2020s. Finally, of the 69 total industrial parks, 20 of them have 10 or fewer available acres, and 10 of them are full, meaning that nearly half of the industrial parks in the Region may benefit from expansion, even if there appears to be a surplus in each county. Proximity to other available acreage should be considered when evaluating where expanded acreage should be located. For example, Twin Towers Industrial Park in Portage County is full, but it is near several other parks with extensive available acreage. This contrasts with Oneida County, which only has 2 available acres countywide, indicating a need for industrial expansion throughout the entire county.

The locations of the Region’s industrial and business parks are shown in **Map X**. Appendix B of the North Central Region Industrial Park Inventory, Absorption, and Needs Study contains a listing of industrial park characteristics such as amenities offered and land availability, while detailed maps showing land availability within each park can be found in Appendix C of the same plan.