

## 6. Transportation

### The Transportation System

Many of today's transportation issues and problems are rooted in past development decisions and City policies. Transportation is not an isolated planning component, but is directly related to land use decisions and other public policies. Thus, transportation should be considered with respect to all aspects of the planning process.

Regionally, the City of Winona serves as an important transportation hub, with several active rail lines, the Mississippi River port, and with Highways 14, 43 and 61, and the proximity of Interstate 90. This section outlines key characteristics of each of the existing transportation modes, including roads, freight, rail, river, and the airport. Previous documents that are relevant include the 1995 Comprehensive Plan, and the 2002 Winona Intermodal Study.

Winona connects to the region via US Highway 61, Minnesota Highways 43, and 14 and Interstate 90 (seven miles to the southeast via Highway 43). US Highway 61 is designated as the Great River Road, a historic and scenic byway of the Mississippi River, stretching nearly 3,000 miles and running through 10 states. The route serves as a major visitor attractor. Within the City the major routes include Sarnia Street, Huff Street, Broadway (6<sup>th</sup>) Street, Sanborn (8<sup>th</sup>) Street, Main Street, Olmstead Street, 2<sup>nd</sup> Street, Riverview Drive, Pelzer Street, Gilmore Avenue and Mankato Avenue.

Road jurisdiction is shown in Figure 18. Roads may fall under the jurisdiction of the State, City or County, regardless of where they are located. Those roads identified as Municipal State Aid routes or County State Aid Highways are eligible for state transportation funds.

Functional classifications of major roads and Average Daily Traffic (ADT) levels are shown in Figure 19. Functional classification is a federal system of classifying roads based upon the roles they play within the transportation network. (See sidebars for definitions of these classifications).

Issues identified during the planning process include: the need to improve traffic circulation and connectivity with activity centers and interest points within the City, a desire for more and brighter lighting, access management along major routes, improving the aesthetics of Highway 61 and addressing the spacing of economic activity along the corridor. Other issues highlighted included a need for better signage to provide wayfinding throughout the City, the need for a high-capacity route from Highway 61 to the river and examining the need for a loop around the City or an east-west arterial.

**Parking:** There are 16 municipal parking lots in the downtown area of the City of Winona, providing 867 parking stalls with 612 available for long-term day parking (up to 12 hours) and 255 available for shorter term day parking (up to 2-3 hours). Downtown parking supply and demand is the subject of much discussion and controversy, and both need to be re-evaluated in light of potential new uses in the downtown and riverfront.

**Road Freight:** The truck route system was modified after the 1995 Comprehensive Plan to improve access to industrial areas within the City and to address past issues regarding wayfinding. The time delays created by the rail

**What are Functional Classifications?**  
Federal regulations require that each state classify roadways in accordance with Federal Highway Administration criteria. Functional classification defines the role each road plays within the transportation network. The functional classification hierarchy consists of Freeways, Expressways, Principal Arterials, Minor Arterials, Collectors and Local Streets.

- **Freeway:** A limited-access highway with no traffic stops and with grade-separated interchanges at major thoroughfares. Intended for high volume, high speed traffic movement between cities and across a metropolitan area. Freeways are not intended to provide direct access to adjacent land. (I-90 is nearest freeway.)
- **Expressway:** A limited access highway with some grade crossings and signals at major intersections. Intended for high-volume, moderate to high speed traffic across the metropolitan area with minimal access to adjacent land.
- **Primary Arterial:** A street primarily intended to provide for high volume, moderate speed traffic between major activity centers. Access to abutting property is subordinate to major traffic movement and is subject to necessary control of entrances and exits.

- Minor Arterial: A street that augments and feeds the Principal Arterial system and is intended for moderate volume, moderate speed traffic. Access to abutting property is partially controlled.
- Collector: A street that collects and distributes traffic to and from local and arterial streets. Collectors are intended for low to moderate volume, low speed, and short length trips while also providing access to abutting properties. At the time a collector street is platted, it may be designated as a residential or commercial/industrial collector, depending upon the predominant land use it will serve. A commercial/industrial collector must be constructed to higher standards in order to serve truck traffic.
- Local: A street for low volume, low speed, and short length trips to and from abutting properties. During the platting process a local street may be designated as an industrial, commercial, high-density residential, normal residential, or low volume residential street, depending upon the predominant land use it will serve.

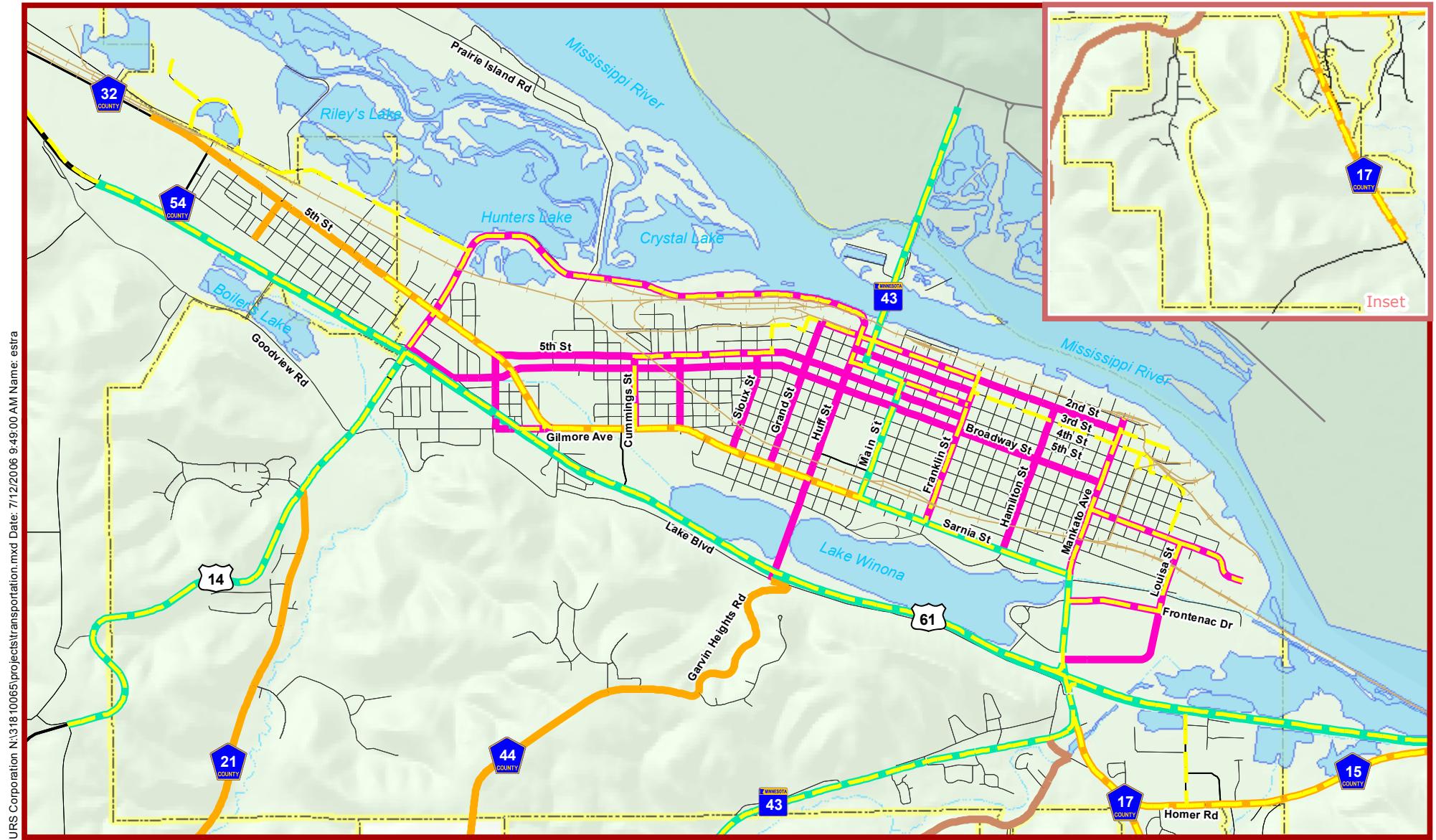
crossings adversely impact travel time for road freight, providing a competitive disadvantage for them. Existing truck routes are shown in Figure 18

**Pedestrian and Bicycle Transportation:** The City of Winona and the City/County Bicycle Advisory Committee have developed a detailed bikeway route map identifying existing and planned facilities. There is a strong desire to create a more bike and pedestrian friendly environment, with walkability of the campus also being a desirable goal. There may be difficulties in crossing major routes, including Hwy 61 at Parks Avenue, Gilmore Avenue and Pelzer Street. Existing bike lanes have been identified as inadequate, since many are designed as dual-purpose parking-bike lanes without adequate clearance for bicycles. While many efforts have been expended to improving at grade rail crossing for pedestrian and bike users, concerns remain about these potential conflicts. Existing and planned bikeways and trails (as of 2006) are shown in Figure 20.

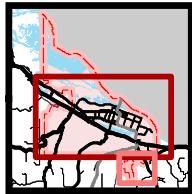
**Transit:** The Winona Transit Service was established in 1977 and serves the cities of Winona and Goodview. The program administration is conducted through the City Clerk's Office, and the operations are contracted through Yellow Cab of Winona, a private company. The City owns the vehicles but Yellow Cab provides all maintenance and repairs as well as dispatching and staffing. Four routes are offered on a Monday-Friday daytime schedule. The Transit Service utilizes handicapped accessible buses on each of the four routes. Additionally, the regular route buses will deviate up to  $\frac{1}{4}$  of a mile off the route to provide curbside service. This can be requested during midday runs, 15 minutes prior to the time the bus would pass closest to the desired pick-up point. Transit routes are shown in Figure 21.

Transit issues identified include a desire to improve stops, a desire for improved maps, and an interest in a dial-a-ride system for those needing point-to-point transportation. Elderly ride services are offered and there may be some interest in seeing this expanded. There is additional interest in transit-oriented development, in which higher-intensity land uses are located in areas with high-frequency transit service.

**Airport:** The City-owned Winona Municipal Airport, also known as Max Conrad Field, serves passengers and cargo and is governed by MnDOT Aeronautics. The airport has two runways, one a 5,199-foot paved runway rated for both single and double-wheeled aircraft, the other a 2,553-foot paved runway rated for single-wheeled aircraft only. According to a 2000 MnDOT survey, the pavement is rated from "Good" to "Very Good" condition, requiring only routine maintenance. Landside facilities consist of an arrival/departure building dating from 1949 that is used for aviation testing and training; it also contains a pilot's lounge and weather information. The fixed based operator (FBO) for the airport occupies another building nearby. Two conventional and three T-hangars are used for aircraft storage. Cargo is handled at the airport, but there are no specific facilities to accommodate it. Parking for approximately 30 automobiles is provided. The 2002 *Airport Layout Plan Update* prepared by Mead & Hunt recommended future improvements, including building a new arrival/departure building, providing additional automobile parking, and additional hangar space. While there are no current plans to relocate the airport, constraints on extending the runway may call for future discussions on relocating the airport.



Map Location



**URS**

- Truck Route
- Municipal State Aid
- Trunk Highway
- County State Aid Highway
- County Road

Data Sources: City of Winona, MnDOT, ESRI, URS

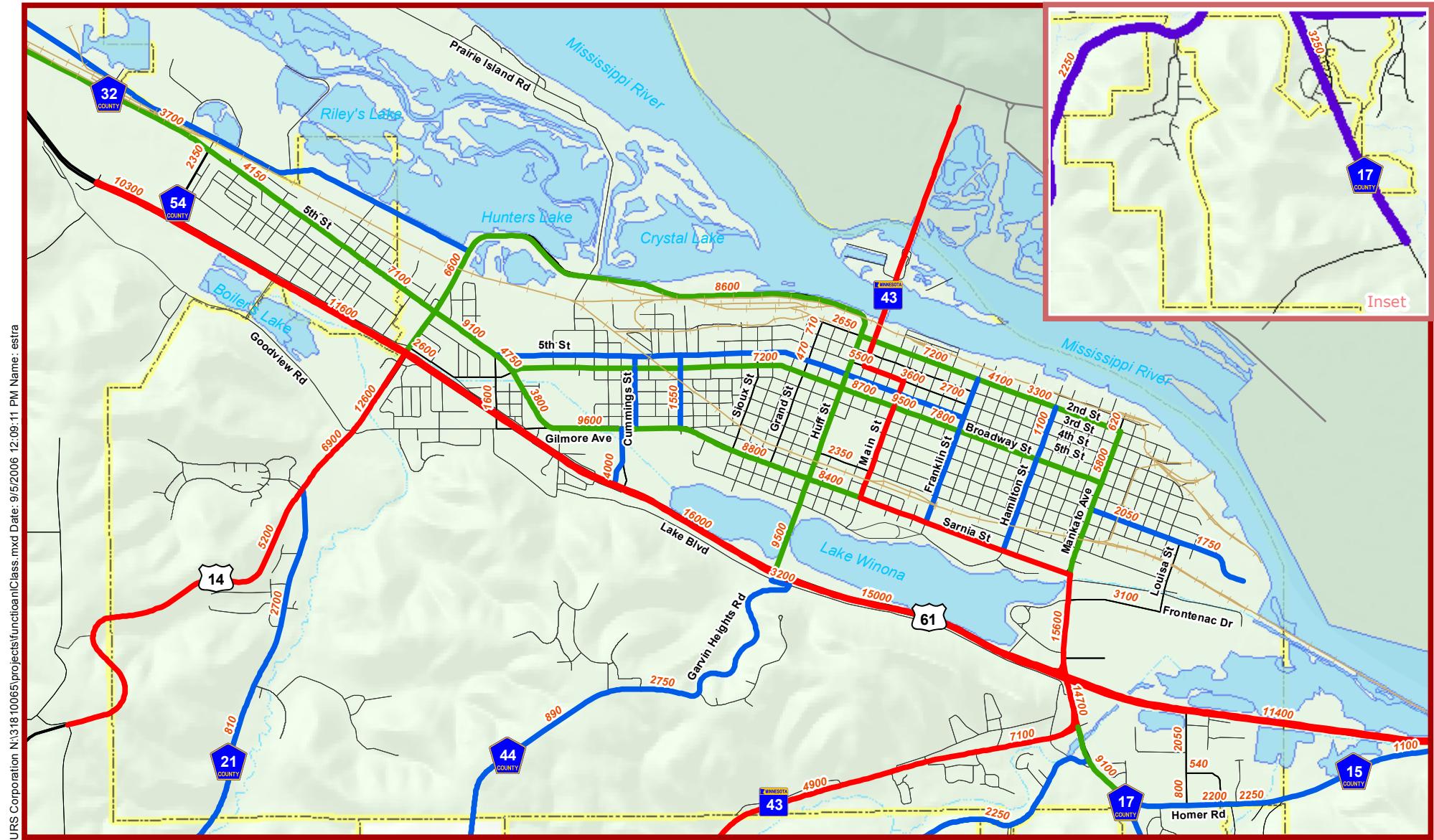


0 0.5 Miles

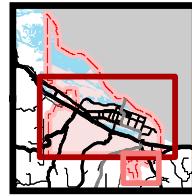
## Figure 18

### Roadway Jurisdiction & Truck Routes

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Map Location



**URS**

**Functional Classification**

- Major Arterial
- Minor Arterial
- Collector

Data Sources: City of Winona, MnDOT- Traffic Counts 2003, ESRI, URS

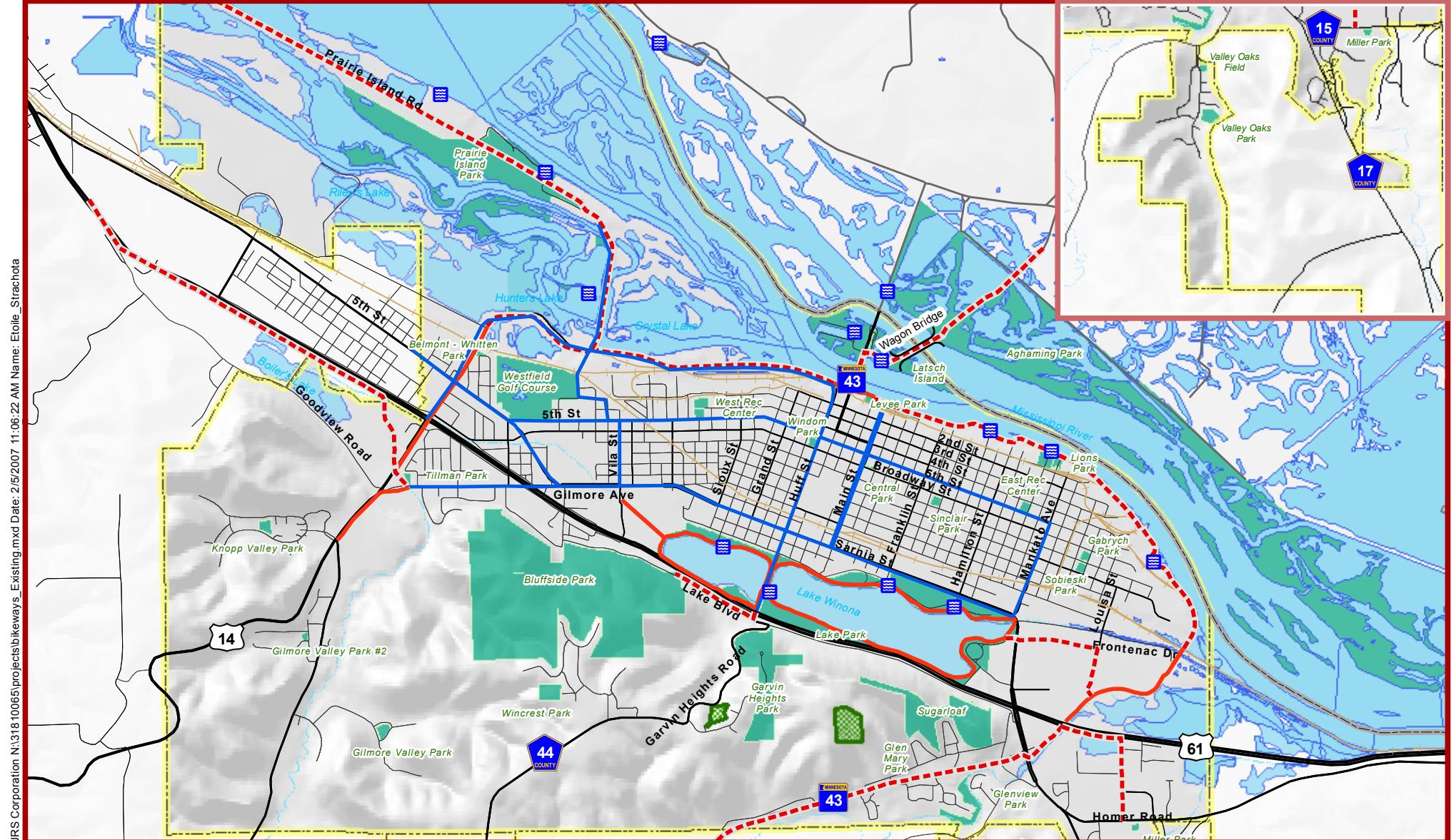


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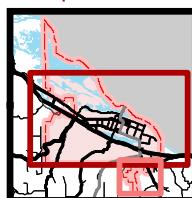
Figure 19

## Functional Classifications and Traffic Counts

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Map Location



#### Legend

- Water Access
- Park
- Undeveloped

#### Type of Bikeway

- Multi-Use Trail
- - - Proposed Multi-Use Trail
- Signed Bike Route

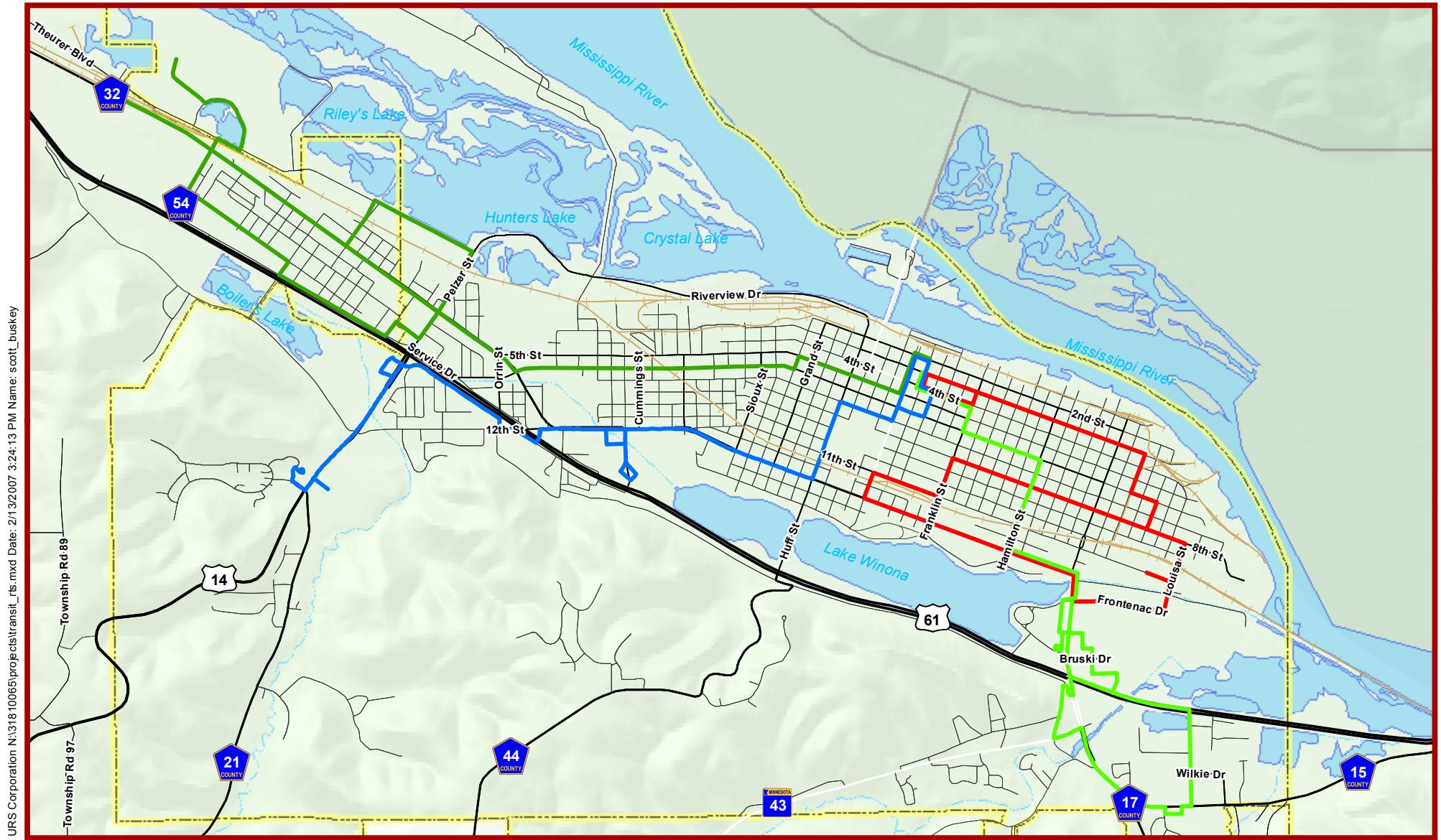
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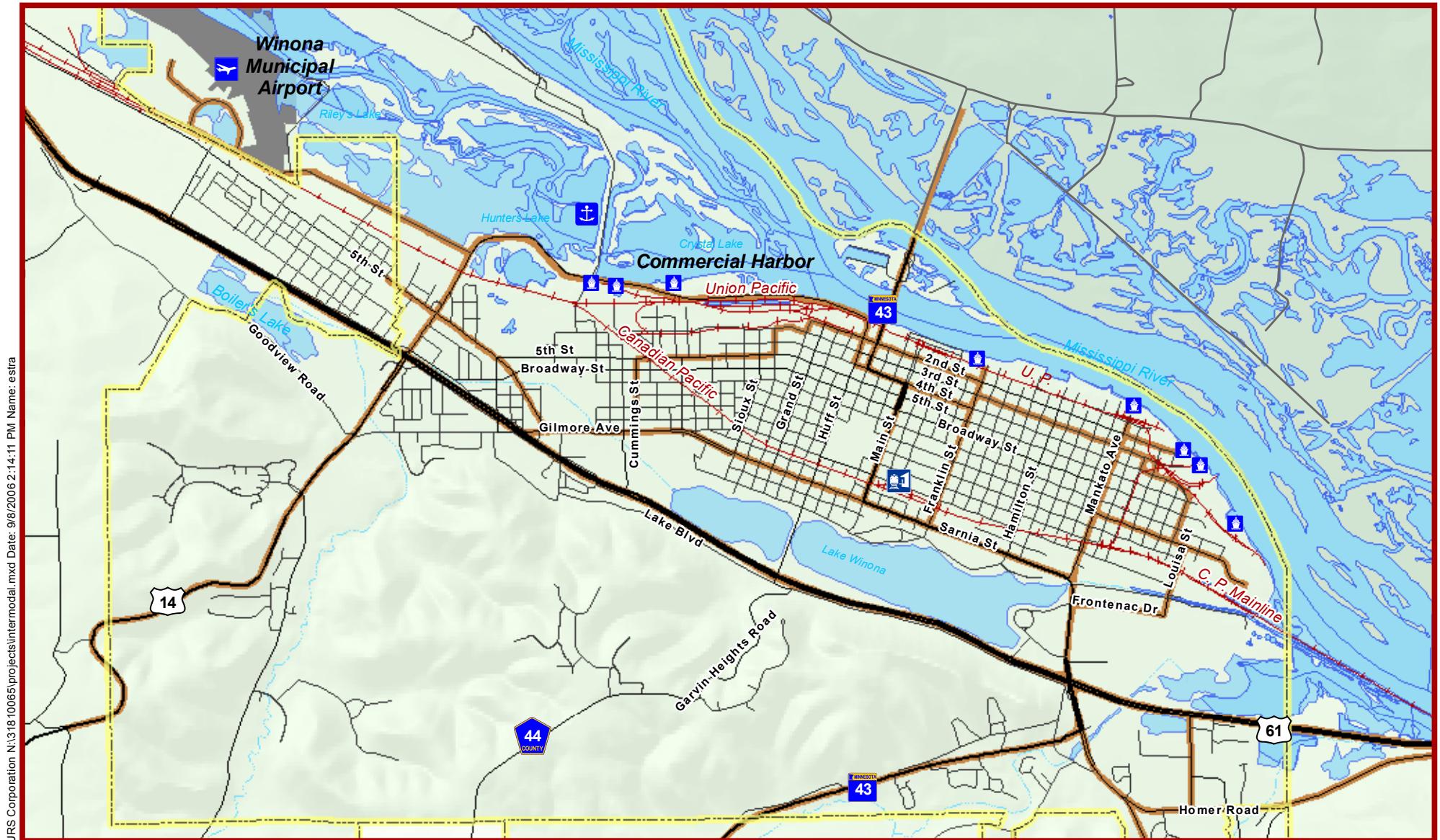
Data Sources: City of Winona

Figure 20  
**Existing and Planned Bikeways and Trails**

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0 Miles  
0.5





Map Location



**URS**

- Truck Route
- ⚓ Commercial Harbor
- ⬆ Industrial Port Facility
- 🚂 Amtrak Station
- ✈ Airport

Data Sources: City of Winona, MnDOT, ESRI, URS

Figure 22  
**Intermodal  
Transportation Facilities**

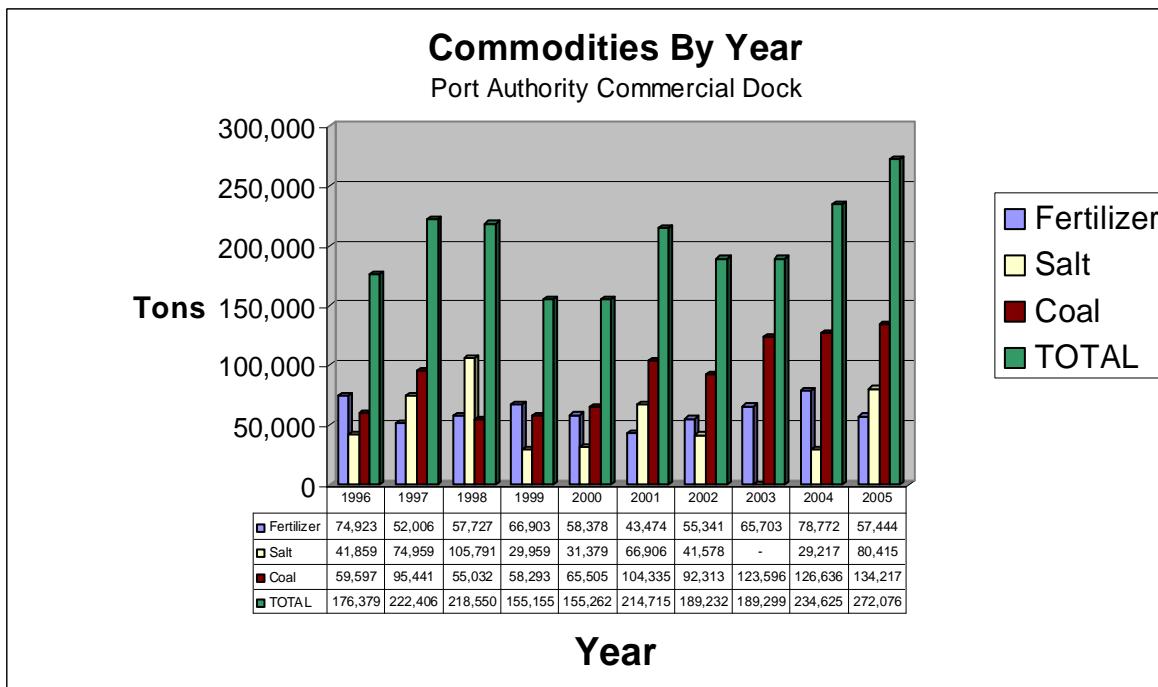
August 2007



Rail: Conflicts between rail and both motorized and non-motorized vehicles and movements create congestion issues and safety concerns; in addition, proximity to housing creates livability issues. The *Winona Intermodal Study* identified a baseline of 30 trains per day in 2002, with a projection of 64 trains per day by 2020. The rail storage yard near Levee Park creates particular non-motorized access difficulties.

- Passenger – Amtrak serves Winona on the daily Empire Builder route from Chicago to Seattle/Portland, about three hours traveling from St Paul or almost six hours from Chicago. There is a desire for an intermodal facility that would allow smooth flow of passenger services from rail to all other modes, including bus services, taxi service, limousines and bicycles, etc.
- Freight The Canadian Pacific Railway (CPR), Union Pacific Railroad (UP), and Dakota, Minnesota & Eastern Railroad (DM&E) provide freight service to Winona. The major long-studied issue is the desire to move rail storage away from the Downtown/Levee Park area. The major freight lines and storage yards/tracks are shown in Figure 22, Intermodal Facilities.

Figure 23. Port Commodities by Year, 1996 - 2005



Source: Winona Port Authority

Port of Winona: The Mississippi River is an integral part of the character of Winona, historically and visually, and it also provides major commercial and recreational opportunities. The Port of Winona is the second largest commercial harbor in the state on the Mississippi River (after St Paul) and the third largest harbor in the state (after Savage), with seven port terminals serving the river. The Port Authority generates revenue as a result of commercial activity and is an important local landholder/developer. Major port facilities are shown in Figure 22. Port traffic fluctuates from year to year, but has recently been increasing, as shown in Figure 23.

## Proposed Transportation Improvements

The *Winona Intermodal Study* (June 2002) analyzed the efficiency of intermodal rail, truck and barge activity into the Port and through the city while identifying strategic transportation improvements that can work in concert with one another. One of the major issues identified in the study that is of particular relevance to the Comprehensive Plan is the problem of grade crossing conflicts, including travel delay and safety related to other vehicles and pedestrians.

The following goals were identified for the study:

- Relieve congestion and improve traffic flow into and through the City of Winona and the Port of Winona;
- Improve the quality of life for the citizens of Winona; and
- Improve safety for the traveling public.

Chapter Eight of the intermodal study discusses major issues. Of these, two sections are of particular interest: one highlighting access to the Port and one on the need for grade crossing improvements to reduce crash exposures.

Section 8.1 of the intermodal study discusses issues of land access to the Port. Port access is essential for both rail and commercial trucking, but is constrained by limited right-of-way along Riverview Drive and the levee. For truck traffic, railroad crossings cause frequent delays in travel through the City of Winona. Other major issues are the lack of a central off-site staging area for trucks along Riverview Drive and truck routing designations that may not adequately accommodate current and future trucking needs.

Section 8.4 of the intermodal study details the likely reduction in crash exposure due to proposed rail crossing improvements. These improvements include grade separations (overpasses or underpasses) and relocation of rail switching operations. Grade separations were proposed for Bundy Boulevard extended to the east side of the City, at Huff Street and at Pelzer Street on the west side of the City. Relocation of switching activities would eliminate the Wall Street track and switching at Levee Park.

The primary recommendations of the intermodal study included the following improvements. Some of these recommendations have been implemented, others are still in the planning stages, and others have been modified.

- Levee Park Rail Yard Relocation: Rail cars are stored and switched at Levee Park Yard, which is located directly south of Levee Park, a major recreational area and riverfront gateway. The removal of the rail storage yard will eliminate the physical and visual barrier between downtown Winona and the Mississippi River. The rail line, which serves the industrial users along the river will remain, while the storage area will be removed. This project eliminates switching operations for Bay State Milling at Walnut Street. Additional switching lines and storage tracks will need to be constructed east of Walnut Street to Laird Street. Grade crossings could be closed at Franklin, Kansas and/or Liberty streets. This project would significantly improve safety and access for park users, while allowing for redevelopment of the current rail storage yard property and would provide for future growth of rail traffic at riverfront industries.

- CP rail yard relocation and Amtrak Station improvements: CP maintains local offices and a rail yard adjacent to the Amtrak Station, where rail cars are stored and switched. Switching operations block the Main Street and Franklin Street crossings. This concept involves construction of five substitute tracks near Pelzer Street including a maintenance building and engine service track for the CP.

This project also removes the CP yard tracks and traffic at the Amtrak Station. This will eliminate switching over Main and Franklin streets. This concept, in conjunction with the Wall Street project, would remove the majority of all switching operations along the CP mainline, significantly reducing congestion. The project also allows for redevelopment of the property and potentially the future development of a multi-modal transit facility in the vicinity of the station.

- Wall Street track removal and switching track replacement: CP operates over the Wall Street track to access riverfront industries. The track is located within the street right-of-way for about 2,800 feet and intersects with seven cross streets and 30 driveways. Switching of cars from the main line to the Wall Street spur causes significant delays of vehicle traffic on Mankato Avenue. Removal of the Wall Street spur will eliminate most but not all switching conflicts on Mankato.
- Bundy Boulevard Extension: This project was replaced by the "Louisa Street Extension" discussed below.
- Proposed Roadway – Rail Crossing Enhancements. The CPR mainline operates over approximately 16 grade crossings within the city limits of Winona, effectively bisecting the City. There are currently as many as 26 train movements a day. Coupled with the projections within this study, future rail volume will certainly cause even greater delays to vehicular, pedestrian, bicycle, public transit and emergency vehicle traffic. Proposed grade separations and enhancing some crossings are designed to mitigate some of these effects. Recommended changes include a four lane Pelzer Street/Theurer Boulevard grade separation (overpass), now largely complete, a two lane overpass for Bundy Boulevard (see below under "Louisa Street Overpass"), and several underpasses to connect the Winona State University campus with its athletic fields. Since the intermodal study, some of these improvements have been completed and others modified.

### Other Transportation Priorities

The City identified the following improvements in 2006, in addition to those listed above, as priorities for funding under a proposed local option sales tax. Although the tax was not approved by voters in November 2006, most projects continue to remain as priorities, as discussed in the Transportation Plan chapter of the Comprehensive Plan.

- Louisa Street extension: This project is designed to provide a second access to the East End of Winona. This new street will provide access to the Riverbend area including the commercial and industrial businesses. Traffic will have an alternative to Mankato Avenue. The entrance to Fleet Farm and the businesses south of Highway 61 will be closed and Louisa Street will have a better designed intersection at Highway 61. The intersection will be designed with a stop light option when traffic warrants the lights. An overpass would also

be constructed over the CP rail tracks. (This project replaces the original proposal for a Bundy Boulevard extension, given the presence of wetlands along the Bundy Boulevard alignment.)

- Louisa Street overpass: The Louisa Street overpass would be a two-lane rail overpass over the CP rail, connecting with the Louisa Street extension to Highway 61. The project would eliminate delays at grade crossings on the East End of Winona. Pedestrian and bicycle access would be built as part of the overpass. Truck access in the East End of Winona would be improved to the industries. Traffic levels may be reduced on Mankato Avenue.
- Sarnia Street extension into the Riverbend Industrial Park (connecting to Louisa Street): The intersection at Mankato Avenue and Sarnia Street is part of the Highway 43 corridor. It is not currently a fully-functioning intersection and needs to be redesigned to facilitate circulation from Mankato to Sarnia and from Sarnia into the Riverbend area. A newly-designed intersection allowing for full traffic turns would require extension of Sarnia on the east connecting with Frontenac Drive.
- Third Street extension to Prairie Island Road: The Third Street extension would connect Third Street from Prairie Island Road east to Gould Street near the City's Central Garage. This project has now been removed from the list of current transportation priorities in the Transportation Plan (Chapter \_\_\_\_\_ of the Comprehensive Plan).
- Highway 61 access improvements, Vila Street to Highway 14: The city of Winona and the Minnesota Department of Transportation have been working on design issues on Highway 61 between Vila and Pelzer streets. This would involve changes in the Junction and Orrin intersections at Highway 61. Final plans have not been decided upon, but possible scenarios are being reviewed by MnDOT. The city will participate with MnDOT in the final design of the improvements.
- Levee Bike and Pedestrian Trail: The City/County Bicycle Advisory Committee has been working for years to construct a bike and pedestrian trail along the riverfront. A number of easements have been agreed upon, leaving only a few areas yet to be obtained. Portions of the riverfront trail could be constructed including the underpass on Highway 61 to the Middle School. A long-term goal would be to provide connections to the Wisconsin trail system and the Root River trail along with connections throughout the city. (See discussion in the Riverfront section of this report)
- Pedestrian Underpasses: Pedestrian underpasses under the CP rail line were recommended to be constructed at Johnson and Winona streets, as well as a four-lane underpass at Huff Street (later dropped from the priorities list).

## 7. Public Utilities

This chapter summarizes current conditions and plans for expansion or improvements to the City's major utility systems: water, sanitary sewer and storm sewers/flood control.

### Water System

Winona's water supply and distribution system was inventoried in the 1995 Comprehensive Plan and improvements to the system were recommended in the 2002 *Water Supply and Distribution Plan* prepared by Bonestroo, Rosene & Anderlik Associates. Background information from the 1995 Comprehensive Plan and findings of the 2002 plan are summarized in this section.

The geology of the Winona area means that glacial drift aquifers are in short supply, except for areas near the river. Aquifers in blufftop areas tend to be deep and expensive to obtain. The karst, or limestone-dominated topography in these areas also increase the risk of contamination of aquifers via sinkholes, caves and springs.

The City currently obtains its raw water supply from eleven municipal wells in three well fields:

- Levee Park Well Field: six wells within Levee Park
- Westfield Well Field: three wells on the Westfield Golf Course;
- Wincrest Well Field: two wells in the Wincrest subdivision on the bluff top above Hwy. 61.

Water from the Levee Park field is treated at the Johnson Street Water Treatment Facility and water from the Westfield Well Field is treated at the Westfield Water Treatment Facility. A new Wincrest Water Treatment Plant was completed in 2003.

Treated water is stored at one elevated and four ground storage facilities that have a combined capacity of 5.1 million gallons.

The existing water distribution system began in 1882, and consists of over 100 miles of water main. The system is divided into six service areas. The Lower Service Area encompasses the majority of the City. Four service areas on high ground – Knopp Valley, Valley Oaks, Sugar Loaf and Treetops – are served by booster stations, pumps and reservoirs, while the Wincrest service area operates independently.

Problems with the existing system include low pressure in some locations, high pressure in other, as a result of ground elevations, as well as low fire flows in some locations.

Recommendations for improvements to the existing system in the Water Supply Plan include:

- Replacement of four wells in Levee Park;
- Replacement of older water mains;
- Improvements to booster supply stations to increase water pressure;
- Other improvements to increase storage capacity and improve water quality in specific service areas.

Many of these improvements have been accomplished as of 2007.

The long-term water system plan includes extension of water service to a new Wilson Service Area that would extend south on County Road 44 and Highway 43 to I-90. These improvements would be phased in contingent on future urban expansion and population growth. Note that the "ultimate" system plan is designed to serve a future population of 52,000, or almost double the City's current population. The medium-term projection in the plan indicates a population of 29,325 in 2020. Note that these figures are considerably higher than the projections provided by the State Demographer, of 29,134 by 2030.

### Sanitary Sewer System

The Winona Wastewater Treatment Plant, located on Shives Road, serves the needs of both the City of Winona and the City of Goodview. From 1997 - 1999, the plant was upgraded at a cost of approximately \$5 million. The current plant has a design capacity of 9.6 MGD (million gallons per day), which allows room for current and future expansion. Winona's Wastewater Treatment Plant utilizes a trickling filter with activated sludge system to process influent. Treated sludge and wastewater are then discharged in accordance with the Plant's permit. An Industrial Pre-Treatment area handles large discharges from specific industries before they enter the treatment plant.

Like the water system, the City's sewer system was studied in 2002, in the *Sanitary Sewer System Study* prepared by Bonestroo, Rosene & Anderlik Associates. The study focused on expansion areas, rather than the existing system. These areas, all south of Highway 61, are currently divided into six major sanitary sewer districts, each defining the limits of service for a separate trunk system: Gilmore Valley, Wilson, Wincrest, West Burns Valley, East Burns Valley, and Pleasant Valley. Like the water plan, the sewer study envisions an ultimate service area extending beyond the current limits of development within each service area and ultimately extending along Highway 43 to I-90.

### Storm Sewers and Flood Control

The storm sewer systems serving the main part of the City are considered adequate. The Phase II Mississippi River Flood Control Project, completed in 1985, protected the City from river flooding with eleven miles of permanent dikes and six storm sewer pumping stations. A U.S. Army Corps of Engineers project in the mid-1990s routed Gilmore Creek into Boller's Lake and added dikes for 100-year flood protection, thus removing much of the City's west end from the flood plain. Areas along Burns Creek above Homer Road and the area between Homer Road and Highway 61 remain in the flood plain. While most of the City is protected, issues remain regarding the potential for severe flooding in the stream valleys south of Highway 61. Another issue identified in the 1995 Comprehensive Plan that remains unresolved is that of the discharge of storm sewers into Lake Winona and resulting impacts on water quality. Improved management of stormwater to minimize environmental impacts is discussed in the Comprehensive Plan under the topic of Environment and Energy.