

Chapter 6 — Implementation and Conclusions

Implementation Plan

All long-range plans benefit from a good implementation or action plan. Taking action on the many recommendations in this report requires attention to several factors, not the least of which is the ability to secure funding. Today, competition for funding is fierce. With this in mind, leaders must allocate appropriate levels of funding to the highest priority projects. The need also exists to identify cost-effective projects that provide additional safety improvements or protect specific corridors through enhanced access management strategies. Now more than ever, citizens of the region must come to consensus on creating additional funding resources to support regional transportation infrastructure needs. Innovative financing strategies like a sales tax referendum, transportation bonds, developer impact fees, vehicle registration fees, or a combination thereof will be needed over the next decade to maintain the quality of life and economic vitality of the region.

To adopt and implement the plan, local decision-makers must work proactively with stakeholders such as:

- Citizens and businesses
- La Crosse County
- La Crosse Area Planning Committee (LAPC)
- Wisconsin Department of Transportation
- Cities of La Crosse and Onalaska; Villages of Bangor, Holmen, and West Salem
- Private Development Industry
- Elected leadership in the Wisconsin State Assembly
- Neighboring municipalities within the region

Completion of the *La Crosse County Roadway Plan* represents an important step toward implementing multimodal improvements that affect travel safety, mobility, development patterns, and aesthetics of the La Crosse region. Some of the recommended improvements will be implemented through the development review process. Major infrastructure improvements most likely will be a product of state and federal funding. However, transportation improvement funds are limited and competition for them great.

Furthermore, citizens often are frustrated over delays in getting transportation improvements completed. Unfortunately, the planning, design, and construction of publicly-funded transportation projects typically takes 10 years or longer in environmentally-sensitive areas. Local, state, and private partnerships offer strategic advantages to implementing improvements on a timely basis. The implementation plan recognizes each challenge and suggests strategies to address them. General recommendations and actions strategies follow to help the County achieve its goals.

General Considerations

To fully implement the plan, the region must identify stable, timely, and equitable methods of funding. Evolution toward a creative and effective mix of funding from various sources and stakeholders in the economy and transportation system of this region is a worthy goal. While most policy and program initiatives will occur at the local level, some improvements will occur as a result of development and redevelopment opportunities. The majority of responsibility for implementing these recommendations will require a coordinated effort between Wisconsin DOT, the LAPC, and local governing bodies.

Beyond these initial guidelines listed below, the success of the *La Crosse County Roadway Plan* hinges on the County continuing to work with and educate local citizens and businesses. While public support can encourage implementation, opposition can significantly delay a project. General considerations include:

- Use this plan as a tool to review proposed development projects and plans as they locate and are implemented along County Roads.
- As transportation corridors are improved and expanded, minimize impacts that negatively affect the character and integrity of adjacent neighborhoods by introducing gateways or traffic calming improvements.
- Promote alternative modes of transportation through better street design and developer participation.
- Promote access management techniques to protect the safety, mobility, and integrity of key regional transportation corridors through interconnectivity and cross-access between existing and proposed developments.



Construction Phasing

The timeframe needed for implementation was a consideration for the study area improvements. Factors that can affect the timeframe include funding availability, permitting, right-of-way acquisition, and public support or opposition. Also, those corridors or intersections with perceived safety issues may receive more emphasis for quicker implementation. With this in mind, not all of the improvements can be made at one time.

The following information provides the proposed timeframe of implementing the roadway recommendations described in Chapter 2. The timeframe of project recommendations is addressed in two phases – short-term (2 to 7 years) and long-term (10 to 20 years). It should be noted that some of the improvements may be constructed as part of the land development process, in which case the phasing of implementation would be dependent upon market forces and real estate trends in the area. Ultimately, phasing of roadway and intersection improvements should be based on crash trends and congestion problems as well as local and political support for the projects. Therefore, the timeline presented in the following tables is expected to be fluid with projects moving up or down the list.

Table 6.1 details the roadway projects listed in Chapter 2. Access management improvements have been given a cost of \$500,000 per mile, which reflects the cost of constructing a landscaped median. However, as noted in Chapter 3, landscaped medians are not necessary and/or possible for portions of these corridors. In these locations, the \$500,000 can be used to fund other strategies such as driveway consolidation, wayfinding signage, or signal system enhancements. Regardless, some access management strategies can be constructed by private land developers during the development or redevelopment of land adjacent to these corridors. The reconstruction projects, which include modifying the shoulders to 4-foot (2-foot paved and 2-foot gravel), likely would be implemented as part of routine repaving. The cost, then, would be lower than indicated in Table 6.1.

Table 6.1 – Implementation Plan (Roadway Projects)					
	Project Type	Project Extents	Project Description	Approximate Length (mi)	Estimated Cost
Short-Term Improvements (2 to 7 years; 2009 to 2014)					
	Total Reconstruction	OA from FO to O	Includes realignment of roadway	2.5	\$4,750,000
	Total Reconstruction	FO from F to OA	Includes realignment of roadway	1.75	\$3,400,000
	Widening	SN from S to OT	Widen to 3 lanes; no bike lanes; sidewalk one side	1.15	TBD
*	Widening	S from US 53 to SN	Widen to multilane	1.0	*
	Widening	D from DH to William Ct	Widen to 3 lanes with bike lanes	0.35	TBD
	Reconstruction	W from D to M	Construct 2-foot paved and 2-foot gravel shoulder	2.0	\$720,000
	Reconstruction	M from W to D	Construct 2-foot paved and 2-foot gravel shoulder	4.25	\$1,500,000
^	Access Management	HD from MH to US 53	Access management strategies	2.0	\$1,000,000
				Subtotal	\$11,370,000
Long-Term Improvements (10 to 20 years; 2017 to 2027)					
	Reconstruction	XX from Highway 35 to ZN	Construct 2-foot paved and 2-foot gravel shoulder	6.75	\$2,400,000
	Reconstruction	C from Hwy 108 to Hwy 108	Construct 2-foot paved and 2-foot gravel shoulder	11.25	\$4,000,000
^	Access Management	MH from US 53 to HD	Access management strategies	1.0	\$500,000
^	Access Management	SN from Pinecrest Ave to S	Access management strategies	2.5	\$1,250,000
^	Access Management	S from SN to US 53	Access management strategies	1.0	\$500,000
	New Roadway Location	Connecting Z to XX	New construction	#	#
**	New Roadway Location	Connecting Garland St East to Linse Rd	New construction	#	#
				Subtotal	\$8,650,000
				Total	\$20,020,000

Notes: * Project with committed funding

^ Costs for access management strategies estimated to be \$500,000 per mile; Strategies include a variety of considerations, so costs will vary;

Extents and costs for these new locations are not available due to variability pending a final alignment

** The new location would be the responsibility of the locality or constructed as part of the land development process

Table 6.2 outlines intersections identified for improvements in Chapter 2. The table does not include two locations for new interchanges on I-90. These locations, at County Roads M and J would improve access to the region’s freeway. However, construction funding likely would be the responsibility of the state. Both projects are expected to be constructed as long-term projects.

Table 6.2 –Implementation Plan (Intersection Improvements)

Project Type	Project Location	Project Description	Estimated Cost
Short-Term Improvements (2 to 7 years; 2009 to 2014)			
Intersection Improvement	HD and Hale Dr	Access control	\$30,000
Intersection Improvement	OT and SN	Turn lanes	\$300,000
Intersection Improvement	T and Hwy 108	Signage	\$2,000
Intersection Improvement	B and O	Turn lanes; lighting	\$160,000
Intersection Improvement	B and U	Turn lanes	\$225,000
Intersection Improvement	M and B	Signage; pavement markings	\$18,000
Intersection Improvement	M and C	Bypass lane	\$200,000
Intersection Improvement	M and O	Access control; signage; pavement markings	\$20,000
Intersection Improvement	D and DH	Bulbouts; curb ramps	\$35,000
		Subtotal	\$990,000
Long-Term Improvements (10 to 20 years; 2017 to 2027)			
Intersection Improvement	I and Hwy 33	Reconstruction	\$350,000
Intersection Improvement	OT and XX	Reconstruction	\$500,000
		Subtotal	\$850,000
		Total	\$1,840,000

Traffic Impact Study Policy

Many communities across the United States utilize traffic impact studies (TIS) to assess the impacts of proposed development and to develop a list of recommended mitigation measures that should be constructed to mitigate traffic impacts caused by a proposed development. This is due in part to governmental agencies having to install mitigation measures to improve conditions at locations caused by development and due to limited budgets available for these types of improvements. The purpose of a TIS is to assess impacts of traffic increases due to a new development on the surrounding transportation network. By attracting additional traffic to a proposed site, a new development may hinder the ability of the County to maintain a safe and efficient roadway system. The primary goals of a TIS include:

- Ensuring that the surrounding roadway network is not significantly impacted
- Evaluating the number, location, and design of access points
- Identifying site specific problems and determine any necessary improvements

TISs will be beneficial to the County by helping identify potential issues during the planning phase of a development, identify improvements necessary to accommodate the proposed development, assess the impacts of proposed access points, and provide traffic data and additional information regarding traffic operations on the surrounding roadway network.

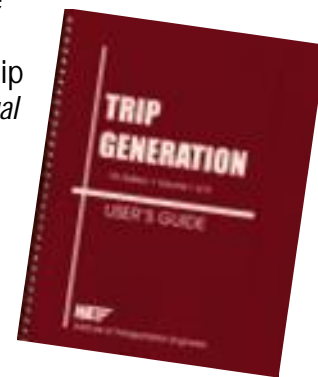
National and statewide reviews of TIS policies helped develop a policy that best fits the characteristics of La Crosse County. The national review showed that while differences among policies exist, many communities have similar requirements regarding the steps that should be completed as a part of a TIS.

A review of similar TIS policies in Wisconsin counties confirmed if and how other counties assess the impacts of development on their roadway network. A total of five counties were contacted, including Portage, Waukesha, Dane, Eau Claire, and Adams. Eau Claire and Portage Counties do not require traffic impact studies at this time. Dane County’s zoning committee can require a study as a condition of development but these usually are required only in rare instances. Adams and Waukesha both have a defined policy that identifies when a traffic impact study is required. Both Adams and Waukesha Counties require that the developer pay for the study and the mitigation measures recommended in the final study. The construction of these mitigation measures is a condition of either plat approval or the permit process depending on the county.

Recommended Guidelines

Below is a description of the recommended guidelines for TISs being completed for La Crosse County:

- All developers are required to estimate daily and peak hour trip generation for their proposed development to determine if the threshold is reached that defines if a TIS is required. The trip generation rates shall be determined using the current version of the Institute of Transportation Engineers (ITE), *Trip Generation Manual*. If trip generation rates are not provided in the *Trip Generation Manual* for a proposed land use, additional research or study may be required to estimate the number of trips generated. The *Trip Generation Manual* includes both linear regression and/or average rates for various land uses. The selection of either the linear regression or average rate to estimate trip generation should be based upon the proposed development size and the R² value of the regression equation.
- If the number of peak hour trips generated by the proposed development is over 50 a traffic study should be required.
- If a study is required, the County should either designate a consultant or approve the consultant selected by the developer. This helps ensure that responsible consultants are selected to complete TISs. If the developer is allowed to select a consultant without County approval, an independent consultant review by the County may be used to verify the results of the study. The cost of any independent review shall be paid for by the developer. The study shall be completed by an engineer that is licensed in the state of Wisconsin.



- If it has been determined that a traffic study is required, an initial scoping meeting should be required with the County Highway Commissioner, County Planning Department, and the consultant completing the study. Prior to the scoping meeting, the consultant should provide County staff with a memo that documents the proposed peak periods that will be analyzed, list of intersections to be analyzed, background growth factors, pass-by and internal trip reduction factors, list of trip distribution percentages, and list of scenarios to be analyzed. The consultant should propose modifications to the TIS policy for approval prior to commencing the study. Pass-by trips are trips that will travel to and from a proposed development that are not generated by the development. For example, many trips that travel to a gas station are drivers that are making a trip that would exist regardless of whether the gas station existed or not. Internal trip reduction is an adjustment in the number of trips for a site that serves multiple trips within the proposed development. A portion of the trips generated by a mixed-use development will usually include trips between several businesses located on the proposed site, resulting in several trips that never impact the adjacent roadway system. There are guidelines published by the Institute of Traffic Engineers that give guidance on typical pass-by and internal trip reduction factors based on the land uses included in the proposed development.
- The level of analysis recommended for proposed developments should be governed by the impacts the site is expected to have on the surrounding transportation network. For sites located in rural unincorporated areas the minimum number of intersections that should be included in the analysis are intersection(s) that provides direct access to the site and one additional intersection that is most impacted by the proposed development and serves a County Highway on at least one approach. For sites located within incorporated areas and that are anticipated to impact a county roadway, the minimum number of intersections that should be included in the analysis are intersection(s) that provides direct access to the site and two additional intersections that are most impacted by the proposed development and that serve a County Highway on at least one approach.
- The study should include a review of internal site circulation.

- Most TISs require analysis of both AM and PM weekday peak hour conditions. It is important to note that in some cases the study period(s) should be modified. For example, church sites typically require an analysis of only Sunday morning peak hour conditions.
- The analysis should examine the following scenarios for each peak period that is investigated: existing conditions, opening day no-action, and opening-day build conditions. In cases of large developments that will be constructed in phases, additional scenarios should be required so that mitigation measures can be determine and phased over the anticipated timeline of the development.
- Turning movement counts data will need to be used to complete the TIS. Existing turning movement count data can be used if it's available, is less than three years old, and if the data is adjusted to reflect existing conditions (increased for background growth). If data collection is necessary, two hour peak period counts shall be collected. Weekday traffic counts should typically be collected on a weekday that does not fall during a week with a recognized holiday and should be collected on a Tuesday, Wednesday, or Thursday. If possible the counts should be collected when school is in session. Tube count data is not typically required but will be required if signal justification or multiway stopped control is probable.
- If the anticipated traffic volumes are anticipated to justify a traffic signal at an intersection included in the study area, an analysis of signal warrants shall be completed.
- The traffic analysis shall be based on the methodologies contained in the current version of the *Highway Capacity Manual*. Software packages that are typically acceptable to complete this type of analysis are HCS, Synchro/SimTraffic, and Rodel (for analysis of roundabout). The use of other software packages shall be approved by the County. The latest versions of these packages should be used unless approved by the County. SimTraffic should only be required if the interaction between adjacent intersection is of concern, volumes are approaching capacity, multiway stop control is being considered, or a unique situation justifies its use. The results of the analysis should be summarized by each individual traffic movement and the overall intersection level-of-service (LOS) and delay. The LOS describes traffic conditions – the amount of congestion – at an intersection or a roadway. LOS range from A to F – A indicating a condition of little or no congestion and F a condition with severe congestion, unstable traffic flow, and stop-and-go conditions.
- Mitigation measures based upon LOS in an urban area are typically required if an individual movement falls from a D to an E due the traffic generated by a proposed development. In sites located outside incorporated areas it is recommended that mitigation measures be investigated if an individual movement LOS deteriorates from a C to a D.
- Mitigation measures should also be required based upon safety and access control concepts being implemented along the corridor. Just because mitigation measures are not required due to the anticipated LOS does not mean that improvements are not justified. For example, turn lanes may be required to increase safety along a corridor due to high speed differentials or lighting may be recommended to help illuminate particular intersection(s) at night. It is important to note that signal phasing or timing modifications may be one potential mitigation measure that may be recommended in a TIS.
- Other items that may need to be reviewed as a part of a TIS are pedestrian, bike, and transit facilities; and safety concerns. If a residential development is proposed adjacent to an existing transit route, the addition of a bus stop located near the development should be considered. The addition of sidewalk or bike lanes may be justified if existing facilities are located near a proposed development. Along roadway segments or at intersections where safety concerns exist, additional field observation and a review of available existing accident data may be justified.

Typical Traffic Impact Study Sections

The next section describes the typical sections that are included in a TIS. These sections can vary depending on the content of the study. The following list includes typical sections that are included in a TIS.

- Executive Summary
- Introduction
- Project Background – This section typically includes the following:
 - A description of the proposed development
 - Summary of pertinent information from recent studies completed for sites located near the proposed site
 - A description of the study area, roadways, and intersections included in the study
 - A vicinity map that shows the study area
 - Description of traffic data collected or used to complete the study
 - Graphic showing existing lane geometry and peak hour traffic volumes
 - A description of the existing land use and zoning adjacent to and on the proposed site
 - A description of the proposed land use and zoning for the proposed site
- Trip Generation – This section shall include the trip generation rates calculated for the proposed development and if applicable, any adjustment due to pass-by trips or internal trip reduction. The trip generation characteristics should be summarized in a table that includes the ITE trip generation code, description and size of each land use, number of daily trips, total peak hour trips, and peak hour trips entering and exiting for each land use applicable. If more than one land use applies the total values for daily trips, peak hour trips, and peak hour entering and exiting trips should be summarized.
- Trip Distribution – This section should include a description of the agreed upon site distribution and the methods used to estimate the distribution. A figure showing the local roadway network and percent distribution to and from the site shall be included. The trip distributions may vary by land use (commercial versus residential often vary).
- Projected Traffic Volumes – This section should include a description of the historic traffic growth rates assumed and method used to develop the background traffic volumes. A summary of the procedure used to obtain total traffic should also be included. Traffic volumes for each peak hour analyzed should be summarized in a figure that shows background (no-action), site generated, and total traffic volumes for each individual traffic movement.
- Traffic Analysis – This section includes a description of the analysis methods used to complete the study and lists the scenarios analyzed. For each intersection the existing geometric conditions, the results of the analysis, and recommended mitigation measures should be documented. The LOS and anticipated delays should be shown for each individual traffic movement and the entire intersection for every scenario analyzed. Improvements that are required due to existing and background traffic should be identified separately from those required due to the proposed development.
- Conclusions and Recommendations
- Appendices – These shall include any supporting information including traffic model output and traffic count data collected in the field.

Any adopted TIS policy should be reviewed after several traffic studies have been completed. This review will help ensure that requirements are reasonable to developers and the needs of the County.

Action Plan

The following action items include appropriate steps for local leaders to implement the specific recommendations and general policy directions presented in the *La Crosse County Roadway Plan*. Some of these tasks can be initiated relatively soon (within the next year or two). However, not all the listed items are expected to be completed within this time frame.

- To determine intersection geometrics, turn lane lengths, and the appropriate intersection control method requires more detailed traffic data. The County should implement a traffic data collection program that includes tube and turning movement counts at key intersections across the County. Data would typically be collected where two county roads intersect. Not every location needs to be counted yearly and a rotation can be set up so that the key locations are counted every 3-5 years. This data would be helpful when improvements are being considered at a particular location.
 - Accident data provides important information regarding potential improvements that can be made to improve safety along a roadway segment or at an intersection. Copies of accident reports should be obtained regularly from local police and organized by location. This does not have to be an elaborate system but if citizen concerns are expressed regarding the safety of a facility, this information is the first thing a traffic engineer will request to determine potential improvements that can be used to improve safety.
 - The County should require the completion of a traffic impact study for significant developments. An ordinance should be considered that requires traffic impact studies if certain development thresholds are met. This requirement should involve a review by the County's legal department to ensure all state laws are followed.
 - The County should continue to monitor and support changes in legislation that allow the recovery of costs from developers due to the impacts of their developments. Currently, Wisconsin law prohibits counties from charging a traffic impact fee. Although not particularly applicable in many areas of the County, a change in policy could provide additional funding sources for improvement projects, particularly for those located in incorporated areas.
- The County should work with and encourage local governments to create traffic study requirements for proposed developments. If a study is being completed, the County should be involved to make sure that County facilities impacted by the proposed development are included in the study.
- If local units of government utilize traffic impact fees, the County should work to ensure that necessary improvement to county roadways are considered and the local unit of government gets required mitigation measures installed. Although counties cannot currently collect traffic impact fees, local governments can legally assess traffic impact fees. Local governments can also pay to improve county and state facilities.
- The County should formally adopt access spacing guidelines to ensure County facilities operate safely and efficiently in the future. As development and redevelopment plans are proposed, the County should review these plans and incorporate applicable access management concepts presented in this report.
- At locations where increased pedestrian, bicycle, and transit use is anticipated or desired, "Complete Street" concepts should be implemented. This action may require additional dialog with WisDOT, but these design features can provide a facility that accommodates all modes and provide opportunities for landscaping and other enhancements that would make the County facility more appealing.
- The County should evaluate and prioritize the roadway projects for implantation as recommended for the next two to seven years. Alternative funding strategies and solutions should be explored in addition to the Long Range Capital Improvements Plan identified in Chapter 2. With increasing demand placed on the region's roadways, it is clear that the County cannot wait indefinitely to address these recommendations. Delay in initiating these short-term, high-priority projects will be detrimental to the region's transportation system and valued quality of life. Likewise, any delay in implementing the short-term projects will carry over to the long-term (10 to 20 year) initiatives.