

# TRANSPORTATION ELEMENT

**EXECUTIVE SUMMARY**

In 1977, SWWRPC staff and representatives from its five member counties conducted a thorough analysis of the region's transportation system. The report's goal was to: serve as a resource for the residents of southwest Wisconsin to use in analyzing transportation proposals; inform readers of the many varied and complex interrelationships evident in any transportation system; help determine where the emphasis should be placed in planning activities; and to provide a more comprehensive outlook when dealing with transportation problems.

In the intervening years, other transportation plans and reports have also looked at Iowa County and the region, resulting in many improvements to the transportation system.

This document is structured to provide historic context (see Map C.1 for early transportation routes in southwest Wisconsin) and to provide information on local issues within the transportation framework. Although many issues are presented in a regional context, the assertion made in the SWWRPC 1972 *Technical Report No. 4: Prospective for Regional Transportation Planning* holds true today: "It should be emphasized, however, that regional planning is not a substitute for local planning. On the contrary, regional planning is intended to strengthen local planning efforts by providing a more comprehensive base of information in a regional context in order to facilitate rational private and public decisions on the local level."

The advantage of using a regional context to inform local transportation planning is that the relationship to scale is reinforced. From this perspective, the Transportation Element provides historic and regional context, considers local transportation needs, and based on local input provides a 20-year jurisdictional plan that can serve as a resource guide and implementation tool.



**Wisconsin State Statute 66.1001(2)(c)**

*(c) Transportation element.*

A compilation of objectives, policies, goals, maps and programs to guide the future development of the various modes of transportation, including highways, transit, transportation systems for persons with disabilities, bicycles, electric personal assistive mobility devices, walking, railroads, air transportation, trucking and water transportation. The element shall compare the local governmental unit's objectives, policies, goals, and programs to state and regional transportation plans. The element shall also identify highways within the local governmental unit by function and incorporate state, regional and other applicable transportation plans, including transportation corridor plans, county highway functional and jurisdictional studies, urban area and rural area transportation plans, airport master plans and rail plans that apply in the local governmental unit.

Beginning on January 1, 2010, any program or action of a local governmental unit that affects land use shall be consistent with that local governmental unit's comprehensive plan, including ...  
 (m) An improvement of a transportation facility that is undertaken under s. 84.185.

## **TRANSPORTATION POLICIES**

- **Aesthetics**
  - Consider nominating appropriate qualifying roads for the state’s Rustic Roads program.
- **Transit**
  - Support the further development and promotion of paratransit services for local residents.
  - Explore intergovernmental interest in the creation of a small formal or informal Park-and-ride—possibly in or near Edmund.
- **Land Use**
  - During the planning process, and beyond, coordinate with WisDOT so that designated sites for development, and the anticipated volume of traffic generated, will have safe access to the highway system via the local roads network.
- **Cost**
  - Maintenance and Improvements Funding

## **TOWN OF LINDEN**

In reviewing the transportation survey responses that had been completed by residents, the Town of Linden’s Plan Commission identified the primary issues and concerns for this plan.

- The response to all three of the questions related to the most satisfactory, the least satisfactory, and the aspect that was the most important improvement priority of the Town of Linden’s existing transportation system was that: “There is no system. There are only roads for private vehicles.”

The Town of Linden’s Plan Commission respondents identified transportation projects or issues that they foresee in their jurisdiction.

- In the next 10 years: (no response).
- In the next 20 years (the planning window for the comprehensive planning process): “Perhaps USH 18 will be expanded to four-lanes and a diamond interchange will be developed at the intersection of USH 151 and CTH A.

NOTE: Neither of these projects are a part of WisDOT’s current 20-year planning vision.

The next section looks more closely at the locally identified transportation issues. In reviewing the transportation survey responses that had been completed by residents, the Town of Linden’s Plan Commission respondents ranked the following transportation issues as having the highest priority for meeting local needs (#1 is the highest priority ranking):

1. **Transportation safety**
2. **Connectivity with the larger transportation system**
3. **Tourism (including preservation of rural views)**
4. **Agricultural-vehicle mobility**
5. **Transportation to support economic development**
6. **Freight mobility**
7. **Transportation needs of the elderly and disabled**
8. **Recreational transportation uses**

These issues thread throughout the Town of Linden’s plan—including its housing, economic development, land use, and implementation elements. Although the scope of this plan is local, it recognizes that local planning is part of the mosaic that should inform WisDOT’s vision and priorities for budgeting and planning. WisDOT also acknowledges the complexity of balancing these issues:

*“Wisconsin’s healthy economy has also caused increased commuter and commercial demand on local roads and streets. Much of the state’s 100,000 miles of local roads are facing the same aging infrastructure needs as the state highways. Furthermore, an ever-increasing number of local roads are experiencing congestion problems as communities continue to grow. Because it is essential that state highways and local roads and streets work*

*in unison, the state has to continue to provide funding to local units of governments to help support construction, improvement and maintenance of locally owned highways, roads, streets and bridges. As is the case with the state highway system, it is likely that demands on local roads and streets will continue to grow in the future (WisDOT)."*

Like WisDOT, local governments grapple with these issues and constraints as they make decisions related to housing, development, schools, roads, and funding. A report entitled *The Evaluation of Statewide Long-Range Transportation Plans*, examined Wisconsin's Transportation Plans and concluded:

*"Population growth alone is a challenge that is anticipated in many states. Wisconsin anticipates a 13 % growth over the plan period [through 2020]. This will create additional demand on existing transportation facilities, along with requiring additional services. This need for services will be compounded by the fact that both its elderly and working age populations will be increasing, with their separate transportation needs" (prepared for the FHWA and US DOT, April 2002)."*

### **2000 US Census for the Town of Linden**

This data, drawn from transportation-related responses, is included because it provides some insights related to possible future needs.

- The age of residents is important—those under 15 do not drive; those over 62 may, at some point, be users of shared-ride transportation services. Data for Vehicles Available is also included.
- Employment Status and Work-at-Home numbers provide some perspective on commuting patterns, as does information on Commute Time and Time Leaving Home To Go To Work.
- Information on the Age of Housing Stock is included because housing construction yields increased trip generation and its impacts should be considered.

What future needs is indicated? How do they overlap? It can be difficult to answer these questions and it is more difficult without public input and participation. For WisDOT, this is not simply a goal—it's an obligation. As required by federal law, "*Environmental Justice*" requires public involvement efforts to reach out to minority and low-income populations.

Why? Because historically the interests of these groups have been ignored in transportation decision-making. In Iowa County a four-person household is considered to be *low-income* if it has a total annual income of \$18,100 or less/year. According to the 2000 U.S. Census, 7.3% of Iowa County's residents are in this income category and WisDOT is required to make every effort to ensure that their input helps to inform transportation planning decisions.

**Table C.1 – 2000 US Census Data**

POPULATION	T Dodgeville 1501	T Eden 375	T Linden 888	V Linden 570	T Mifflin 635	T Mineral Point 916	Iowa Co. 22,780	Wisconsin 5,363,675
<b>AGE</b>								
Percentage of the population under 15 years	23.5%	26.2%	<b>23.6%</b>	26.3%	29.0%	25.0%	22.0%	21.0%
Percentage of the population age 62 or older	14.6%	11.2%	<b>20.0%</b>	11.6%	8.8%	9.3%	15.5%	15.4%
Median age (in years)	40.1	33.4	<b>39.9</b>	30.6	33.4	31.7	37.1	36.1
<b>EMPLOYMENT STATUS</b>								
Employed percentage in the workforce (age 16 & older)	75.1%	75.6%	<b>64.8%</b>	66.7%	79.8%	76.4%	72.5%	65.8%
Unemployed percentage in the workforce	1.3%	2.6%	<b>2.0%</b>	4.8%	3.0%	2.6%	3.0%	3.2%
<b>WORK CARPOOLING</b>								
Percentage residents in the labor force working at home:	13.2%	23.3%	<b>18.7%</b>	1.5%	18.8%	15.7%	8.4%	3.9%

**Table C.1 (cont.) – 2000 US Census Data**

<b>WORK CARPOOLING</b>								
Percentage who drove to work alone	72.5%	55.4%	<b>70.9%</b>	81.7%	57.5%	64.8%	74.6%	79.5%
Percentage who carpooled	10.6%	7.9%	<b>7.8%</b>	13.2%	11.4%	11.5%	12.6%	9.9%
2-person carpool	7.7%	6.9%	<b>7.1%</b>	8.4%	6.2%	9.7%	9.5%	8.1%
3-person carpool	1.4%	1.0%	<b>0.2%</b>	4.0%	3.8%	1.0%	1.8%	1.2%
4-person carpool	1.1%	0.0%	<b>0.5%</b>	0.7%	1.5%	0.8%	0.6%	0.4%
5- or 6-person carpool	0.4%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.0%	0.2%	0.2%
7 or more person carpool	0.0%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.0%	0.4%	0.1%
Public transportation	0.2%	0.0%	<b>0.5%</b>	1.8%	0.0%	0.0%	0.2%	2.0%
Motorcycle	0.0%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.4%	0.0%	0.1%
Bicycle	0.2%	0.0%	<b>0.0%</b>	0.0%	0.0%	0.0%	0.2%	0.4%
Walked	2.4%	12.9%	<b>2.1%</b>	1.8%	12.3%	6.0%	3.8%	3.7%
Other means	0.8%	0.5%	<b>0.0%</b>	0.0%	0.0%	1.6%	0.4%	0.4%
<b>COMMUTE TIME TO WORK</b>								
Less than 10 minutes	28.1%	33.5%	<b>14.0%</b>	8.6%	26.4%	25.9%	25.7%	20.7%
10-14 minutes	22.5%	11.6%	<b>29.9%</b>	18.6%	6.5%	18.6%	13.8%	18.4%
15-19 minutes	15.2%	16.8%	<b>21.5%</b>	21.2%	13.7%	18.9%	11.2%	17.0%
20-24 minutes	6.3%	20.6%	<b>7.6%</b>	12.3%	14.8%	12.0%	10.7%	14.4%
25-29 minutes	3.3%	3.2%	<b>3.5%</b>	6.3%	10.1%	3.1%	4.8%	6.2%
30-34 minutes	5.3%	5.2%	<b>7.3%</b>	5.2%	17.0%	4.5%	8.2%	9.6%
35-44 minutes	3.3%	0.0%	<b>1.2%</b>	4.5%	3.2%	3.1%	7.3%	4.7%
45-59 minutes	8.1%	2.6%	<b>6.1%</b>	7.8%	1.4%	8.7%	9.8%	4.6%
60-89 minutes	4.7%	6.5%	<b>4.7%</b>	10.0%	5.4%	4.0%	6.3%	2.6%
90 or more minutes	3.3%	0.0%	<b>4.4%</b>	5.6%	1.4%	1.2%	2.2%	1.7%
<b>Mean travel time to work (in minutes)</b>	<b>23.1</b>	<b>17.0</b>	<b>23.4</b>	<b>29.0</b>	<b>21.8</b>	<b>19.2%</b>	<b>24.7</b>	<b>20.8</b>
<b>TIME LEAVING HOME TO GO TO WORK</b>								
5:00 to 5:59 a.m.	11.9%	17.4%	<b>16.3%</b>	19.3%	12.6%	13.4%	12.5%	9.6%
6:00 to 6:29 a.m.	8.6%	16.1%	<b>6.7%</b>	7.8%	10.1%	12.3%	12.0%	8.9%
6:30 to 6:59 a.m.	13.2%	13.5%	<b>13.7%</b>	9.3%	12.3%	12.7%	11.4%	11.7%
7:00 to 7:29 a.m.	15.9%	25.2%	<b>17.2%</b>	17.8%	15.9%	17.2%	15.5%	14.3%
7:30 to 7:59 a.m.	19.9%	7.7%	<b>13.1%</b>	4.8%	14.1%	11.8%	15.6%	15.7%
8:00 to 8:29 a.m.	8.6%	4.5%	<b>6.4%</b>	8.2%	6.9%	4.5%	7.1%	8.0%
8:30 to 8:59 a.m.	3.0%	3.9%	<b>2.9%</b>	4.8%	1.8%	5.0%	2.5%	3.7%
9:00 to 11:59 a.m.	4.5%	1.9%	<b>2.0%</b>	5.6%	4.3%	6.6%	5.3%	6.7%
12:00 to 3:59 p.m.	4.9%	1.3%	<b>11.3%</b>	11.2%	5.1%	6.1%	6.7%	9.0%
All other times	9.5%	8.4%	<b>10.5%</b>	11.2%	17.0%	10.4%	11.4%	12.3%
<b>HOUSING STOCK</b>								
Housing constructed between 1990 to March 2000	27.1%	11.6%	<b>17.3%</b>	21.5%	14.8%	17.9%	17.6%	16.4%
1940 to 1989	41.7%	52.2%	<b>41.2%</b>	31.3%	34.2%	43.2%	45.7%	60.0%
1939 or earlier	31.2%	36.2%	<b>41.5%</b>	47.2%	51.0%	38.9%	36.7%	23.6%

**Table C.1 (cont.) – 2000 US Census Data**

<b>VEHICLES AVAILABLE</b>								
None	4.0%	1.4%	<b>3.8%</b>	6.0%	2.5%	0.9%	4.5%	7.9%
One	15.2%	19.6%	<b>22.1%</b>	24.8%	17.3%	16.6%	26.7%	32.5%
Two	52.1%	55.8%	<b>41.9%</b>	39.4%	51.0%	53.0%	43.6%	41.5%
Three or more	28.6%	23.2%	<b>32.2%</b>	29.8%	29.2%	29.5%	25.2%	18.1%
<b>HOUSEHOLD INCOME</b>								
Median reported 1999 household income (in dollars)	\$49,327	\$42,813	<b>\$36,726</b>	\$35,833	\$42,083	\$42,171	\$42,518	\$43,791

**LOCAL TRANSPORTATION INFRASTRUCTURE & ISSUES**

In 2003, the Town of Linden's Plan Commission was asked to identify primary issues and concerns for this plan.

The initial comprehensive planning survey, yielded these responses from the residents of the Town of Linden:

- Eighty-eight percent agreed or strongly agreed that Iowa County's overall road network (roads, streets, and highways) meets the needs of its citizens.
- Eighty-two percent agreed or strongly agreed that the condition of local roads in the Town of Linden is adequate for intended uses.

See the Transit Section of this document for more information on local priorities.

**Transportation Modes**

Plan Commission respondents were asked to identify the transportation modes that currently use public infrastructure within the Town of Linden (in addition to personal cars, trucks, and motorcycles). They are identified below with an **X**.

<b>MODE</b>		<b>Used</b>	<b>Not Used</b>
Travel	Carpooling	<b>X</b>	
	Para-transit (shared-ride, taxi)	<b>X</b>	
Agriculture	Tractors	<b>X</b>	
	ATVs (all terrain vehicles)	<b>X</b>	
Recreation	Bicycles	<b>X</b>	
	ATVs	<b>X</b>	
	Horses	<b>X</b>	
Freight	Trucking		<b>X</b>
	Rail		<b>X</b>
	Air	<b>X</b>	

**Existing Roadways**

The Town of Linden has 82.33 miles of roads:

- 29.47 miles of County Trunk Highways
- 52.86 miles of Local Roads

The most heavily trafficked is the small segment of the USH 151 corridor located in the southeastern corner of the Town of Linden. It has recently been reconstructed as a part of the USH 151 expansion. CTH A connects to USH 151 in the Town of Linden and this intersection was reconstructed as a part of these improvements.

The USH 18 corridor connects east-west traffic from Prairie du Chein to USH 151 and Madison; it also connects east/west traffic to USH 61. The USH 18 corridor is classified on the County's rural functional highway system as a: a Principal Arterial, a National Highway System (NHS) route, a designated passing lane corridor, and a designated long truck route.

Average annual daily traffic counts (AADT) on USH in the Town of Eden:

Year 1981	3140
Year 2003	7,239 (projected 10/2/2002)
Year 2022	9,283

Level of Service (LOS) for USH 18 (based on current conditions, as of 10/2/2002)

Year 2003	3.75 = LOS C
Year 2022	4.28 = LOS D

Level of Service (LOS) is a quantitative measure that refers to the overall quality of flow at an intersection:

LOS A (1.00-2.00)	= traffic moves freely
LOS B (2.01-3.00)	
LOS C (3.01-4.0)	= stable traffic, back-ups are beginning to occur
LOS D (4.01-5.00)	= lowest acceptable rating for an intersection
LOS E (5.01-6.00)	
LOS F (>6.01)	= traffic is extremely restricted, many times experiencing gridlock.

Low level of service rates, higher crash rates, substandard pedestrian and bicycle accommodations, and insufficient turn lane lengths are all indications of intersections that are over-loaded with vehicles.

WisDOT data indicate that east of the intersection of USH 18 and STH 80 (located within the Village of Cobb), the crash rate exceeds the critical rate (i.e., one standard deviation above the average rate).

The USH 18 corridor west of Dodgeville was identified by Meta Manager Data as a possible passing lane corridor. To prevent the increase of conflicts, WisDOT has undertaken S. 84.25 access management. This allows only public road access to the corridor.



*NOTE:* WisDOT's Highway Improvement Program schedule for 2005-2007 indicates plans to replace pavement on the USH 18 corridor in Iowa County, west of Dodgeville. As the schedule indicates, this 14.22 mile Montfort-to-Dodgeville project will cost more than \$4,000,000. It will include the addition of five feet of paved shoulder.

As classified on the Iowa County Rural Functional Highway System map, STH 39, CTH A, E, GG, and QQ are Major Collectors. CTH B, CH, and Q are classified as Minor Collectors. For more information, see Maps C.2, C.3 and C.4 and Table C-2a, C-2b, C-2c.

### **LOCAL ECONOMIC DEVELOPMENT**

Transportation is a factor in location decisions of commercial and industrial development. In locations where the development is included in local plans, communities should also assess their transportation infrastructure and determine what future improvements may be needed. Communication, during this planning process and when unforeseen development opportunities arise, should include WisDOT, adjacent governmental units, as well as interested parties and other stakeholders. The value of local plans is that they inform county, regional, and state plans and this coordination can help to identify the transportation facilities needed by future development.

The Town of Linden's Plan Commission respondents were asked whether their existing local transportation system does a good job of meeting the needs of the jurisdiction's economic development goals related to

- Agriculture                      Yes
- Retail/Commerce              Yes
- Shipping                         Yes
- Manufacturing                 No
- Tourism                         Yes

### **ENVIRONMENT**

Transportation and construction projects can impact the natural environment around a project area. When making short- and long-term transportation decisions, it is important to adequately address environmental implications on air quality and energy consumption; agricultural lands; and wetlands and wildlife. To minimize these effects, efforts to preserve the environment of a project area can include:

- Wetland mitigation (preservation, creation, enhancement and restoration)
- Prairie restoration
- Archeological work
- Hazardous waste management
- De-icing procedures and salt reduction
- Storm water management
- Noise monitoring and noise walls
- Nesting boxes
- Erosion control

One aspect of this is to manage stormwater run-off from transportation facilities. Additionally, transportation improvements and community development decisions should be coordinated and the impacts that each has on the other should be considered. For more information on this topic, see Appendix C-1 and Section E, Agricultural, Natural, and Cultural Resources Element.

### **AESTHETICS**

The Town of Linden's Plan Commission requested more information about the state's Rustic Roads program. According to WisDOT, to qualify for the program, a road:

- should have outstanding natural features along its borders such as rugged terrain, native vegetation, native wildlife, or include open areas with agricultural vistas which singly or in combination uniquely set this road apart from other roads.
- should be a lightly traveled local access road, one which serves the adjacent property owners and those wishing to travel by auto, bicycle, or hiking for purposes of recreational enjoyment of its rustic features.
- should be one not scheduled nor anticipated for major improvements which would change its rustic characteristics.
- should have, preferably, a minimum length of 2 miles and, where feasible, should provide a completed closure or loop, or connect to major highways at both ends of the route.
- a Rustic Road may be dirt, gravel or paved road. It may be one-way or two-way. It may also have bicycle or hiking paths adjacent to or incorporated in the roadway area.
- the maximum speed limit on a Rustic Road has been established by law at 45 mph. A speed limit as low as 25 mph may be established by the local governing authority.

See Appendix C-2 for more information.

### **TRANSIT, ACCESSIBILITY, and SPECIAL NEEDS USERS**

As noted elsewhere in this document, options in Iowa County are limited. The state operates a vanpool program, administered by the Wisconsin Department of Administration, which currently operates seven vans that stop in Iowa County. The closest pick-up point would be Mineral Point or Dodgeville. According to the 2000 US Census, 7.8% of Town of Linden residents carpool to work (70.9% drive alone and 18.7% work at home). As the Plan Commission respondents noted, an informal Park-and-Ride may be something to explore in Section G, Intergovernmental Cooperation Element with Edmund as a possible site. The Town of Mifflin expressed similar interest.

For longer trips, Greyhound bus service travels on the USH 14 corridor through the northern part of Iowa County. There are no stops in Iowa County and none in proximity to the Town of Linden. Plan Commission respondents noted that a regional bus service would be helpful. See Map C.5 for more information.

Although limited, transportation for the elderly and disabled is provided by the Iowa County Commission on Aging. WisDOT's report *Transportation in Wisconsin: a Vision for the 21<sup>st</sup> Century* projects that by 2020 the number of state residents over 65 will increase by more than 50%. Wisconsin has funded a share of local transit operating costs since 1974. Today, state aid is the largest source of funding for Wisconsin's 69 public transit systems—covering more than 40% of eligible operating costs. These transit operating aids topped \$251 million in the 2003-05 biennium. According to WisDOT, Wisconsin is ranked 7th nationally in the

level of state support for transit operating costs. However, as the *Transit* section of this document indicates, the state's aging rural population will be likely to require more transportation options. Although not completely familiar with the services that are available, Plan Commission respondents noted, "We are not sure if this is sufficient to meet current needs, let alone future ones."

The WisDOT/Bicycle Federation of America map of current Bicycling Conditions in Iowa County (see Maps C-6 and C.7 for more information) indicates County Roads and rates the conditions for bicycling. The WisDOT Planned State Highway Priority Corridors and Key Linkages map (also included with this document) recommends further improvements to state and county roads. Of Town of Linden survey respondents who expressed an opinion, only 30% indicated that they agreed or strongly agreed that there should be more biking and walking lanes along public roadways. As the Plan Commission respondents noted, "At this point, there is so little vehicle traffic on Town roads that they serve well as bike trails."

### **1) Support the development and promotion of paratransit services for local residents.**

NEXT STEPS: The Town of Linden may want to work with the Iowa County Commission on Aging to learn more about services, promote existing services, and to possibly support expanded services.

### **2) Explore intergovernmental interest in the creation of a small formal or informal Park-and-ride—possibly in or near Edmund.**

#### **LAND USE**

The land use and transportation relationship is cyclical, beginning when population and economic growth create demand for land development. New development results in more vehicle trips and places greater demand on surrounding streets, roads, and highways. This is a complex interrelationship. As a WisDOT report acknowledges,

*"WisDOT influences land development mostly through the provision of infrastructure. Some transportation-related regulations also may have an effect. For state transportation, the effects on surrounding land uses are often more unintentional than intentional ... the most significant role that transportation plays in land development is affecting access to land."*

Some land use trend indicators include:

- Past and projected population growth
- Employment trends by sector
- Residential housing permits housing prices over the last 5-10 years
- Population densities changes: persons/acre; households/acre; commercial persons/acre use (indicating rate of land consumption)
- Conversion of age-land to non-age-land uses and comparison with the land sale prices land remaining in age (indicating stability of age-uses)
- Participation in Farmland Preservation Program (indicating stability of age-uses)
- Septic system permits (indicating development in unsewered areas)
- Changes (or requests) to expand sewer service areas (indicating expansion of urban service areas)
- Commuting patterns (indicating the relationship between employment and residential land uses)

(From *Land Use in Environmental Documents: Indirect and Cumulative Effects Analysis for Project-Induced Land Development*. WisDOT, 1993)

Local government plans, in conjunction with a zoning ordinance, attempt to direct residential, commercial, industrial, and agricultural uses to the most appropriate part of the community. When coordination is lacking or inadequate, the outcome can cause congestion and increase the chance for crashes. Retrofitting transportation facilities for enhanced mobility and safety is difficult for local governments and WisDOT. For more information, see Appendix C-3.

But realistically, given the cyclical nature of the transportation-land use relationship, when transportation improvements alleviate congestion, the newly developed land may become even more accessible, resulting in higher land values and greater pressure to develop adjacent, undeveloped land. The cycle begins again with more intensive levels of development and greater transportation demands. These pressures are being felt in eastern Iowa County. Although some parts of the county are not seeing growth, they may anticipate continued spillover that will have an impact on local development and infrastructure within the 20-year planning window.

Coordination with local governments and WisDOT can serve to address future mobility needs by looking at the potential impacts of planned development. If plans indicate that increased capacity will be needed, it can be incorporated into the transportation plan for that area. If this communication occurs during the planning process, coordination can help to ensure that more options are considered. One of the tools that can help to assess alternatives is to conduct a traffic impact analysis, looking at possible scenarios.

Ideally, WisDOT is included in the local planning process and effective planning helps the community to realize its local goals for development, efficiency, and safety, while minimizing environmental impacts. This can save both money and time, over the long- and short-term. When developments are planned and sited with adequate transportation facilities the community benefits. Land is developed more efficiently if proximity to other development and to transportation infrastructure. WisDOT (and the taxpayers) benefit because transportation investments continue to function throughout their projected life cycle and the public gets the best return on its tax investment.

The community can plan for areas of new business and housing development that will be served by a system of local roads or streets. Rather than wait for a developer proposal, the comprehensive planning process is an opportunity for the community to lay out a logical system of collectors and local roads in undeveloped areas with the jurisdiction's boundaries. The community can potentially alter the plan to suit a particular development's needs and still uphold an overall plan that ensures efficient and safe connectivity. If there are questions during the planning process about the access management implications of a proposed development, coordination with WisDOT early in the process can help minimize future conflicts. See Appendix C-4 for more information.



As of the fall of 2003 (after the improvements had been completed on the section of USH 151 that passes through the Town of Linden) Plan Commission respondents indicated that they believed that perhaps there are traffic delays at the intersection of USH 151 and CTH A.



Plan Commission respondents do anticipate growth pressures that will impact the transportation system in the future and will result in the loss of rural atmosphere. According to 2000 Census data, 17.3% of the township's housing stock has been constructed between 1990 and March 2000. However, it was felt that roads are adequate to support some future subdivisions of property for new homes if they are constructed adjacent to the Village of Linden or near Edmund. The town does not have development guidelines, and did request more information about this and access management. See Appendix C-5 for more information.



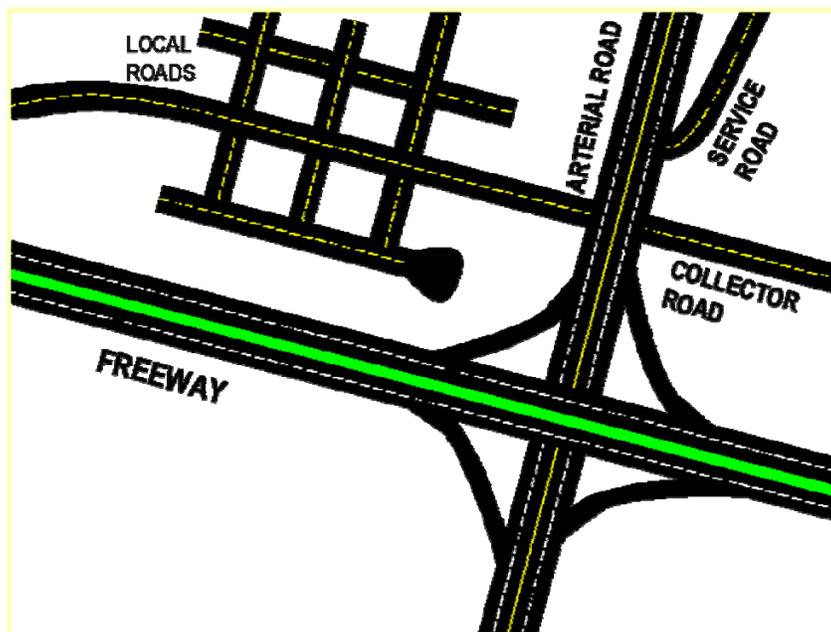
In Section H, Land Use Element, Plan Commission respondents expressed concern about:

- 1) The negative impact of noise from the current "aerobic box" that has been used regularly at the Iowa County Airport, located in the Town of Mineral Point.
- 2) The spectre of USH 18 being expanded to four-lanes and "gobbling up land." NOTE: this much rumored project is not on WisDOT's long range planning schedule, although passing lane improvements will be made to the road in 2007.
- 3) Concern was expressed that increased retail/commercial and industrial/manufacturing would result in increased truck traffic and pollution.



In Section B, Housing Element the Plan Commission respondents noted, "We are not sure that we want to *encourage* any kinds of housing ... New housing should not be located close to active farming operations, due to noise, odors, etc. We need to consider the impact on Town services (road maintenance and plowing, etc.) The majority of residents definitely want the Town to remain rural, so we shouldn't have too many new homes, and/or we should place them very carefully." Comments for Section B, Housing Element further explained that new housing should be encouraged to occur close to the Village of Linden and the hamlet of Edmund, especially along the state highways near those places.

NOTE: During the planning process, and beyond, the Town of Linden is urged to coordinate with WisDOT so that designated sites for housing development, and the anticipated volume of traffic generated, will have safe access to the highway system via the local roads network.



### **ENHANCING & IMPROVING CONNECTIVITY**

Access management attempts to minimize conflicts by coordinating land development access, while preserving the flow of traffic on the surrounding road system in terms of safety, capacity, and speed. The main function of access management is to establish a balance between the existing traffic flow and highway access. It is achieved through managing the design and location of driveways, median openings, and points of access to the state highway system. The level of highway access control is based on the importance of the highway to regional and statewide travel as determined through a functional classification system.

Although controversial in some jurisdictions, its primary goal is to ensure highway safety and to sustain the efficiency of the transportation system so costly retrofits don't have to be made later.

### **EFFICIENCY & SAFETY**

A 1980 report entitled *Access Control* explained the rationale for the state's access management regulations:

*"The highly interdependent relationship that exists between land use and highways makes it necessary for the planning of each to be coordinated with the other. ... A property system must provide access to property and safe, efficient movement of traffic from one place to another. Both of these functions cannot easily be provided on the same street or highway. Vehicles entering or leaving the roadway slow traffic and cause congestion. Congested streets or highways handle less traffic than if traffic were moving freely. In addition, congestion imposes increased travel costs on users in the form of longer travel time and greater operating costs, higher accident rates, and loss of the public investment in the street or highway because its traffic carrying capacity is reduced. Access control can provide an effective and low cost means of abating the harmful effects of congestion. Five direct advantages are afforded by controlling access:*

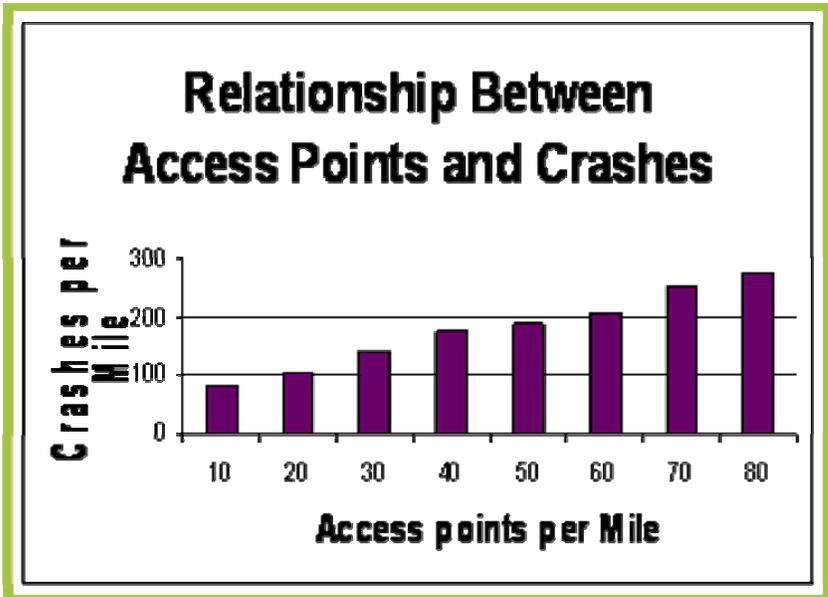
- *Preservation of the capacity and integrity of the roadway*
- *Reduction of travel times*
- *Improved safety and driving conditions*
- *Economy of operation*
- *And protection of the public investment in streets and highways.*

*In contrast, relieving congestion by building new streets and highways [and bypasses] is becoming increasingly less desirable as it becomes more and more difficult to acquire the necessary rights-of-way and to find public funds to pay high construction costs. Continued new construction also consumes extensive amounts of land that may more profitably be put to other uses. ... Like it or not, none of us have an absolute unlimited right to use our land in any manner we please. We must take into consideration the impact that our use of land and land rights will have on others, both our immediate neighbors and the general public. Thus, if use of the right of access creates harmful interference with the public right to travel on a street or highway by increasing congestion and the likelihood of having an accident, the right of access may be regulated..."*

Since 1980, when the quoted report was written, development pressures have only increased. Perhaps the reason that crash data has decreased is that jurisdictions have worked to ensure the safety of corridor routes is preserved.

Nonetheless, access management has been a contentious issue and some people believe that the regulations impede development. Efforts to repeal Administrative Rule 233 came to fruition in 2004. Doubtlessly, there are examples where the implementation of the regulation had been less than ideal.

However, congestion, caused by poor planning, and the resulting loss of the efficiency of a roadway may make development less attractive. On a human scale, the most important issue and the greatest responsibility is to ensure safety. For more information, see Appendix C-5, and Maps C.8 (Access Management), C.9 (Setbacks), and C.10 (Iowa County Traffic Counts) and Tables C-3a and C-3b (Motor Vehicle Crash data for the Town of Linden) at the end of this Section.



**MAINTENANCE & IMPROVEMENTS**

Each year WisDOT completes 350 to 400 state highway projects, costing an average of \$1.5 million each. In addition, WisDOT returns more than \$500 million to local governments to help finance the operation and improvement of locally-owned roads, streets and bridges. According to WisDOT, highways and bridges face increasing pressures as more traffic and larger trucks cause more wear and tear. At this time, more than 30% of the state’s highway pavement and 10% of bridges are deemed to require rebuilding or replacement. WisDOT projects that even with proper maintenance, the average pavement life is approximately 40 years and the average life of a bridge is about 70 years. Almost the entire highway system and a significant number of bridges will need to be replaced by 2020. See Tables C.4 and C.5 and Maps C.11a and C.11b at the end of this Section for more information.

At the time that this plan is being written, local communities receive one-third of state transportation funds. Transportation aids to local communities include funds for local road construction and maintenance, bridge improvements, capital assistance for airports, rail and harbor facilities, flood damage, expressway policing, and transit operating assistance. General Transportation Aids (GTA) are distributed to every town, village, city, and county in the state to help offset the cost of maintaining and improving the local road and street system. This is the largest category of local aid. In the 2003-05 state budget, GTA funding totals \$747 million.

**Reconstruction**

- Completely rebuilds road
- Flattens curves and hills
- Widens pavement and shoulders
- Improves safety and rideability
- May require some land acquisition

**Reconditioning**

- Involves reconditioning plus resurfacing
- Retains existing pavement core
- Improves roadside-shoulder widening and ditch restoration
- Improves isolated deficient curves, hill crests, intersections

**Resurfacing**

- Includes new pavement and gravel shoulders (includes base patching)
- May include intersections paving
- Places beam guards where needed
- Highway needling improvement:
- Maintains specific areas of potholes, extensive cracking, uneven pavement, low shoulders and rutting

—WisDOT

A WisDOT pilot program is underway to encourage local government officials and WisDOT district staff to jointly evaluate potential local projects before they apply to WisDOT for funding. The purpose of this effort is to improve program stability by providing accurate cost estimates and realistic delivery timelines for local highway and bridge projects at the outset, saving both local governments and WisDOT time and money in delivering local transportation projects.

According to the UW-Madison Transportation Information Center, by using the PASER system and Roadware software, municipalities can determine budget parameters, select possible projects, and evaluate the implications of maintenance decisions.



The Town of Linden uses the state's PASER (**PA**vement **SUR**face **EVALUATION** & **RATING**) program requirements noting and reports that it is useful for planning and budgeting. (PASER data/maps will be added to the final document.)

### **COST**

For many local governments, maintenance of the local road system is the single largest expenditure category. Privatization is often touted, but to-date, only a small handful of Wisconsin cities and villages (less than 1 %) have privatized street repair and maintenance. A more common municipal practice in Wisconsin is contracting with county highway departments for certain types of repairs and maintenance, ranging from complete contracting to cooperative projects. Not surprisingly, development can add new demands for services and increase local costs without providing comparable increase in revenues. (Taken, in part, from UW-Extension *Fact Sheet #2: Comparison of Service Production Methods and the Incidence of Privatization*.)

In both 2003 and 2004, the Town of Linden was budgeted to receive \$96,469.50 in General Transportation Aids and Connecting Highway Aids. See Table C-6 at the end of this Section for more information.

### **Capital Improvement Program**

Many municipalities use a Capital Improvement Program (CIP) to assist in planning for major project costs. A CIP is a multi-year scheduling of physical public improvements, based on the examination of available fiscal resources, as well as the prioritization of specific public improvements, to be constructed for a period of five to six years into the future. Capital improvements are those that include new or expanded physical facilities that are relatively large in size, expensive, and permanent. Street improvements, public libraries, water and sewer lines, and park and recreation facilities are common examples of capital improvements. See Appendix C-7 for more information.

The Town of Linden does not currently utilize a Capital Improvement Program and is not interested in more information at this time.

### **FUTURE PROJECTS & PRIORITIES - COST**

#### **Maintenance & Improvements Funding**

The State of Wisconsin's Local Road Improvement Program (LRIP) is a reimbursement program and pays up to 50 % of total eligible project costs, with the balance matched by the local unit of government. Towns are eligible under the Town Road Improvement Program (TRIP). Eligible projects include (but are not limited to) asphalt purchasing, bridge replacement or rehabilitation, design or feasibility studies, reconstruction, and resurfacing. LRIP is a biennial program. See Tables C-7a and C-7b, as well as Appendix C-6 for more information.