



Transportation & Economic Development

A summary of key issues being explored
on transportation options and economic development



A Multimodal Planning Process of the Wisconsin Department of Transportation

MISSION STATEMENT

TRANSLINKS 21 — Wisconsin's 21st century transportation plan — will outline a comprehensive transportation system that moves people and goods efficiently, strengthens our economy, protects our environment, and supports our quality of life. Working with DOT, the public will identify Wisconsin's transportation needs — and help to make tomorrow's transportation choices.

*Tommy G. Thompson,
Governor*

*Charles H. Thompson,
Secretary*



**Transportation Alternatives
for
Economic Development in Wisconsin**

**Prepared by the
Wisconsin Department of Transportation
Economic Development Team**

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EXECUTIVE SUMMARY

Economic development and transportation are closely linked. Economic development stimulates transportation demand by increasing the number of workers commuting to and from work, customers traveling to and from services areas, and products being shipped between producers and consumers. Additional demand can then trigger the need for transportation improvements. Improvements which decrease transportation costs and increase safety may, in turn, stimulate further economic development.

Transportation improvements do not guarantee increased economic development. To increase economic development, an improvement needs to decrease transportation costs or make transportation more reliable. A proper economic climate must also exist, as well as other support services. With these factors in place, transportation improvements can become catalysts for economic expansion. While this issue paper concentrates heavily on freight and passenger issues related to economic development, WisDOT recognizes that economic development cannot come at the expense of our environment or quality of life.

PROMOTING ECONOMIC DEVELOPMENT

The first chapter after the Introduction identifies some major transportation issues facing Wisconsin in the upcoming decades, and proposes alternative strategies for increasing transportation efficiency. The list of strategies is not meant to be all inclusive but rather provides a flavor of some the potential strategies WisDOT could consider in order to improve efficiency. Most strategies have effects which cut across two or more of the major economic sectors; manufacturing, agriculture, tourism, and services. Those multiple effects will be identified in the discussion of each issue.

An additional chapter, titled "Transportation Needs and Direct Employment Opportunities", analyzes WisDOT's Job Ride and Transportation Economic Assistance (TEA) programs. Job Ride provides rides to work for transportation-disadvantaged workers and TEA provides transportation improvements intended to induce job creation or retention in Wisconsin. The final chapter groups- the strategies presented earlier into four alternative packages to promote economic development through transportation initiatives.

MANUFACTURING

The health of Wisconsin's manufacturing businesses is closely tied to overall economic development. The transport of raw materials, subcomponents, and finished products is a significant part of the business costs borne by Wisconsin manufacturers.

This issue paper considers a wide range of strategies designed to aid the further development of manufacturing in Wisconsin. There are five issue areas (and accompanying strategies) examined in Chapter 2 that most strongly impact manufacturing in Wisconsin. They are:

Intermodal Freight Transfer Facilities. For maximum efficiency, productivity, and choice, shippers will require facilities at which cargoes can be readily transferred between modes. Strategies that WisDOT could follow to encourage intermodal facilities include:

1. Letting the network evolve on its own
2. Maintaining the existing infrastructure
3. Guiding the growth of private facilities
4. Guiding network growth with public facilities

Strategic Highway Improvements. Highways link shippers and receivers to the other three modes. Goods are frequently moved from the shipper to a rail, water, or air terminal by truck, and later to the ultimate destination. Alternative strategies which WisDOT could pursue in order to optimize the highway system as one modal link in an overall transportation network of all four modes include:

1. Maximizing use of the existing highway system
2. Extending or improving the multi-lane divided highway system, local roads and connectors.
3. Continually improving the entire highway network in response to demand.

WisDOT is considering a number of actions, possible under any strategy, that would improve the highway network in Wisconsin. These actions include: modernization to improve functionally obsolete interchanges and other segments of the network; new designs to improve the life and service of pavements; rebuilding certain roads in northern Wisconsin to eliminate seasonal weight restrictions; improving the functioning of the Milwaukee Freeway system through a variety of techniques; and establishment of more specific rules for the guidance of the @ Road Improvement Program.

Air Freight. Today's competitive, technology driven economy requires products and parts to move quickly and safely between diverse regions of the nation and world. Wisconsin businesses and consumers are growing increasingly dependent on air freight movements to satisfy their shipping needs. Three strategies which WisDOT could pursue to best meet air freight needs include:

1. Funding navigational aids for small airports
2. Focusing on the development of dedicated air cargo facilities
3. Focusing on the expansion of combined passenger and air cargo services

Retention and Improvement of Freight Rail Service. Rail service is central to the efficient movement of both bulk commodities and manufactured goods, particularly over long distances. Strategies which WisDOT could pursue to ensure adequate rail service throughout the state include:

1. Letting the rail system develop through private initiative
2. Preserving existing rail infrastructure through WisDOT rail funding programs.

3. Preserving and improving service through existing WisDOT rail funding programs.
4. Preserving and expanding service through aggressive state acquisition of entire rail systems.

AGRICULTURE

Agribusiness is a key sector of Wisconsin's economy, with vital linkages to many other sectors. Cash receipts from the sale of agricultural products alone total over \$5 billion annually, and sales of implements and agricultural services to producers boost the total value of agribusiness even higher.

The agricultural sector is characterized by many geographically dispersed producers. Unable to relocate closer to markets, these producers rely on good transportation facilities. Agricultural shipments are generally large, frequently over medium to long distance, and shipping needs center on the movement of bulk commodities such as corn.

Rail and water modes are particularly important to this sector of the economy, especially for exports from Wisconsin. In addition, agricultural producers rely upon local roads for shipments to and from farms and forests. Four major transportation issue areas most closely associated with Wisconsin agriculture are examined in Chapter 2. They are:

Retention and Improvement of Port Service. Shipments of bulk commodities such as coal, grain, salt, and fertilizer, and shipping of steel and extremely large machinery, are particularly reliant on good ports with efficient means for the loading and unloading of ships and transfer of goods to railcars or trucks. Strategies which WisDOT could pursue to enhance ports include:

1. Maintaining existing ports by expanding the scope of projects included in the current Harbor Assistance Program
2. Expanding the Harbor Assistance Program and providing increased funding for projects consistent with WisDOT developed harbor plans
3. Maintaining existing ports, and helping communities purchase and operate them.

The other three issues of importance to agriculture, (freight rail service, strategic highway improvements, and intermodal transfer facilities) were discussed in the previous section, "MANUFACTURING".)

TOURISM

Tourism will continue to be an important element in Wisconsin's expanding economy. Travelers in Wisconsin spent almost \$5.5 billion in 1992, creating over 150,000 jobs (full-time equivalent) and generating close to \$3 billion in income for state residents.

A circular relationship between transportation and tourism exists. Tourism, by its very nature, is heavily dependent on and influenced by transportation networks. Transportation networks are designed based on expected traffic volumes. Tourists increase network demand and thereby

affect the size and design of the network. TRANSLINKS 21 provides a framework to discuss alternative methods for making transportation less expensive and more enjoyable for tourists. When tourists make additional trips to Wisconsin, our economy expands.

This issue paper examines the degree to which economic benefits from tourism might be considered when transportation improvement projects are being evaluated by the WisDOT. The distinguishing factor separating each strategy in the section of Chapter 2 titled "ISSUE: Direct Consideration of Tourism Benefits" (pp. 24-25) is the level of transportation benefits required for project implementation. Those strategies include:

1. Pursuing tourism-enhancing projects that meet standard transportation efficiency criteria.
2. Pursuing projects that do not meet standard transportation criteria unless tourism benefits are included.
3. Pursuing projects which are transportation related, have limited direct transportation benefits, yet promote tourism.

In addition, transportation issues examined in this paper that are relevant to the tourism industry in Wisconsin include Intermodal Passenger Service (pp. 11-13) and Strategic Highway Improvements (pp. 13-17).

SERVICES

Wisconsin's service industries depend on effective and efficient transportation to bring their customers and employees together. Service businesses which export their products to regions outside of Wisconsin are often dependent on intermodal transportation. Strategies examined in Chapter 2 to address intermodal connectivity for passenger services include:

1. Maintaining and adding to current infrastructure, relying on the private sector to take initiatives in intermodal connectivity
2. Maintaining and adding to current infrastructure while also coordinating connectivity between the modes.

Air Service and Strategic Highway Improvements are also issues relevant to this economic sector.

EMPLOYMENT OPPORTUNITIES

For decades the nation's population and employment opportunities haven been migrating from cities to the suburbs. In Chapter 3, this issue paper examines strategies WisDOT could adopt in response to problems created by the dispersion of population and employment to the outlying portions of metropolitan areas and the increased competitiveness of the US economy. To the extent that labor markets operate more efficiently and more jobs are created/retained in Wisconsin, our economy can expand. Proposed strategies appear below.

Mobility initiatives. The alternative strategies are designed to promote economic development by increasing employment among transportation disadvantaged individuals and to ameliorate labor shortages. Job Ride is one WisDOT public transit program currently operating in the Milwaukee area which tries to meet the needs of disadvantaged workers. Alternative strategies are:

1. Continuing the Job Ride program at its current funding level and focusing on inner-city unemployment in Milwaukee;
2. Expanding Job Ride to metropolitan areas statewide;
3. Developing more widely-focused labor transportation assistance.

Special Economic Development Programs. The Transportation Economic Assistance Program (TEA) is a WisDOT program designed to influence firms to locate or expand in Wisconsin. The alternative strategies are as follows:

1. Continuing stringent eligibility requirements where WisDOT participates only in very low risk economic development projects;
2. Implementing more flexible eligibility requirements. Allow WisDOT to participate in higher risk projects in return for higher employment gains.

CONCLUSION

WisDOT recognizes the relationship between transportation and economic development. This issue paper provides alternative strategies which WisDOT could pursue to promote economic expansion. The list of strategies is not intended to be inclusive. However, it does provide a basis for discussion and subsequent planning efforts. The issue paper provides analysis of those strategies based on economic efficiency, institutional concerns, and community and social effects. Recommendations are not included in this paper: rather, recommendations will come from transportation users through the TRANSLINKS 21 public participation process.

CHAPTER 1: INTRODUCTION

Economic Development and Transportation

Economic development is a broad concept referring to the material aspects of community welfare. There are numerous facets of development: growth in income and wealth, equitable distribution of income, decreased infant mortality rates, increased literacy rates, and other indicators of the "quality of life" in a community or a state. One consistent factor in any consideration of development is economic growth, which is the sustainable increase in community income and/or wealth. (Wealth is the set of resources that generate income). This paper will examine the link between transportation facilities and economic growth.

Good transportation facilities support economic growth by lowering the transport costs of users of the transportation network. Direct user benefits are reductions in travel times and fuel consumption, increased reliability, and increased safety in the movement of people and goods. As users' transportation costs are reduced, resources are freed for other purposes.

Direct Transportation Benefits

Businesses directly benefit when goods can be shipped faster, or at lower cost. In addition, both businesses and individuals benefit when their travel times and costs are lowered. Besides the inherent value of increased mobility, individuals can benefit from increased employment options as their range of feasible commuting is expanded. At the same time, the supply of labor to area employers increases as more potential employees fall within their commuting range.

Indirect Economic Benefits

There are also indirect effects of the transportation system on economic growth. These secondary effects may include the expansion of existing businesses as reduced transport costs result in greater profitability and/or increased market share. This can lead to increased employment and incomes as businesses grow. Furthermore, economic activity may expand as these growing businesses in turn demand more raw materials and components from their suppliers. Finally, retail and service businesses can grow as employees spend their additional incomes.

It is widely recognized that wise transportation investments and economic development are mutually reinforcing processes. Good transportation facilities support economic growth, which then leads to more travel and movements of goods, which in turn leads to an increased demand for transportation facilities. This dynamic process of growth necessitates such planning efforts as TRANSLINKS 21.

Purpose and Organization of This Paper

This issue paper is designed to assist Wisconsin citizens and policy makers in deciding which transportation initiatives in support of economic development have sufficient merit to be

considered more fully in the WisDOT's multimodal planning process. The paper is a tool for discussing economic development strategies, and is not meant to be exhaustive.

Chapter 2 will enumerate some of the current and emerging transportation issues that affect Wisconsin's economic growth and suggest alternative strategies to address those issues. The importance of each issue to the four sectors of the Wisconsin economy - manufacturing, agriculture, tourism, and services - will be considered in this section. Of course, many of the policies discussed will have economy-wide impacts, although they would most strongly affect specific sectors.

The manufacturing sector in Wisconsin will be impacted most strongly by the following four issue areas examined in Chapter 2:

- 1) Intermodal Freight Transfer Facilities (pp. 9-11)
- 2) Strategic Highway System Improvements (pp. 13-17)
- 3) Air Service (pp. 17-20)
- 4) Retention and Improvement of Freight Rail Service (pp. 22-24)

The agricultural sector of the Wisconsin economy will be impacted most strongly by the following four issue areas examined in Chapter 2:

- 1) Intermodal Freight Transfer Facilities (pp. 9-11)
- 2) Retention and Improvement of Port Service (pp. 20-22)
- 3) Retention and Improvement of Freight Rail Service (pp. 22-24)
- 4) Strategic Highway System Improvements (pp. 13-17)

The tourism sector of the economy will be affected most strongly by the issue area in Chapter 2 entitled "Direct Consideration of Tourism Benefits". (pp. 24-45). In addition, the tourism industry is affected by the issue areas defined in Chapter 2 as "Intermodal Passenger Service" (pp. 11-13) and "Strategic Highway System Improvements."

The services sector of the Wisconsin economy will be most strongly impacted by the issue area of Intermodal Passenger Service (pp. 11-13), discussed in Chapter 2. In addition, service sector businesses are affected by the issue areas defined in Chapter 2 as Strategic Highway System Improvements (pp. 13-17) and Air Service (pp. 17-20).

Chapter 3 will address the overall issue of employment opportunities in Wisconsin and how they might be enhanced through transportation policies of WisDOT. That discussion will be structured similarly to the discussions in Chapter 2.

The final chapter of this paper will group the various alternative strategies enumerated under each policy area into four overall planning visions that could guide WisDOT policies into the twenty-first century.

CHAPTER 2: POTENTIAL ECONOMIC DEVELOPMENT STRATEGIES

ISSUE: Intermodal Freight Transfer Facilities

As the U.S. economy becomes increasingly interlinked and with the rising importance of international trade, goods are being shipped over longer distances, and shipping and logistics costs are an important portion of overall production costs. The seamless transfer of components, finished products, and bulk commodities between ships, railcars, airplanes, and trucks is key to minimizing those private production costs.

However, the establishment of intermodal transfer hubs and smaller facilities involves identifiable direct and indirect costs and benefits - financial, environmental, and social. The direct benefits would be lower shipping costs to Wisconsin shippers that ship goods over medium to long distances, and to Wisconsin recipients of long distance shipments. This could result in increased profitability, increased market share, increased employment, or all three among those shippers. Indirect benefits could include increased business (income) to suppliers of those direct beneficiaries when those beneficiaries increase production and/or market share, as well as expanded employment among those suppliers. Induced benefits could arise from the increased sales by various Wisconsin businesses to employees of direct beneficiaries and their suppliers. These would be similar under all four alternative strategies to the extent that each strategy could be expected to succeed. However, the timing of costs and benefits, and the degree of public control over intermodal facilities would differ among the alternatives. Although the ultimate effects of establishing such facilities in Wisconsin would be similar under all four strategies, each alternative would differ in certain respects. One of these areas of variation would be in the public costs of each strategy.

Importance to Manufacturing

Much of the manufactured freight traffic is containerized, with products being transferred from ship to railcar or truck, or from airplane to truck, without handling the goods themselves. The boxes are simply lifted from one mode of conveyance to the next. In general, containerized shipments traveling over 400 miles may realize substantial savings by moving by rail instead of by truck. Freight container loadings on railroads in Wisconsin increased by over 26% between 1981 and 1991, from 27,059 containers to 34,185 containers. Shipments which are not time-sensitive may move more economically by water over long distances. In order for Wisconsin shippers of manufactured goods to take advantage of the economies offered by intermodal freight operations, there must be transfer facilities at key points such as major rail corridors or on the peripheries of major urban distribution centers.

Importance to Agriculture

The rail, water, and highway modes are important to agricultural producers in Wisconsin. Agricultural shipments are frequently large lots of bulk commodities such as corn, and move most efficiently by barge or railcar. Of the 307 million bushels of corn produced in Wisconsin in 1992, 42% - or 129 million bushels - were marketed out of state, representing over \$277 million in sales. Most of it moved by barge, with the remainder shipped by rail. To get those commodities from the producers to the water or rail terminals requires truck transport. Facilities

where commodities can be easily transferred from truck or railcar to barge or ship are necessary to minimize the overall costs of shipping agricultural products from Wisconsin.

Importance to Tourism

This sector of the Wisconsin economy is not directly affected by this issue. However, to the extent that intermodal freight facilities serve to channel freight traffic from highways onto water routes or railroads, automobile and bus traffic will move more smoothly, especially in urbanized regions such as southeastern Wisconsin.

Importance to Services

As with the tourism sector, this issue is only negligibly relevant to the services sector of the Wisconsin economy. Indirect impacts are similar to those cited above for tourism.

With this issue, the question is: How might the Department best encourage a seamless freight transportation network comprising all modes? For maximum efficiency, productivity, and choice, shippers will require facilities at which cargoes can be readily transferred between water and rail, rail and truck, and water and truck. Such intermodal transfer facilities involve high up-front costs and often require large tracts of land and highway connections that are adequate to handle heavy truck traffic.

Alternative Strategy #1: Let the network evolve on its own

Private investors are often cited as being best-qualified to evaluate the prospects for profitable investments in commercial facilities such as intermodal transfer sites. If there is sufficient freight traffic and demand for intermodal transfer facilities in any given locale, private firms in the marketplace will be motivated by the quest for profits to provide the necessary facilities. According to some observers, government involvement amounts to "second-guessing" the marketplace, and cannot be as efficient as the calculations of private investors.

Alternative Strategy #2: Maintain existing infrastructure

This strategy is based on the assumption that the basic intermodal infrastructure necessary for economic development is already in place: rails, roads, harbors, airports, and transfer capabilities at those facilities. Further development of intermodal facilities can build upon this foundation, and can be left to private investors responding to market demand. From this perspective, what the WisDOT should do is to maintain the existing public infrastructure through funding and maintenance programs that respond to the needs of the individual modes as they arise. For example, when railroad tracks or bridges are deteriorating, railroad operators, shippers, and local communities can apply to the Department's Freight Rail Infrastructure Improvement Program for funding of rehabilitation projects. Similarly, when dockwalls need rehabilitation, port operators can now apply to the Department's Harbor Assistance Program for funds. Under this strategy, these and similar programs could continue to function as they do now.

Alternative Strategy #3: Guide network growth of private facilities

Under this strategy, the Department could foster the development of intermodal transfer facilities through participation in public-private partnerships by awarding grants and/or loans for construction. This approach could first involve analyzing freight movements in Wisconsin to determine where such facilities might be most advantageously located, and could also involve examining and promoting promising new technologies. A grant and/or loan program could be established to respond to requests from the private sector for quick financing to bridge the gap between private sector financing and the full needs of such ventures as intermodal transfer hubs and facilities that the Department assessed as promising.

Possible WisDOT actions under this strategy might include the following:

- Provide a funding package for water-rail intermodal transfer improvements at the Port of Milwaukee;
- Evaluate and help finance construction of a major rail-air-truck intermodal transfer hub in southeastern Wisconsin.

Alternative Strategy #4: Guide network growth with public facilities

Under this most active strategy, the Department might analyze freight movements and possible locations of facilities as above, and might also construct and possibly operate the facilities as public works. This type of involvement could be similar to the state's current highway program, in which the Department raises funds and allocates them to investments that are entirely under state administration. This option would involve the largest outlay of public money and the largest and most long-term commitment of public resources.

Possible WisDOT action under this strategy might include:

- Construction of a major intermodal transfer hub in southeastern Wisconsin, as above, and operation of the facility, collecting fees for use by private firms.

ISSUE: Intermodal Passenger Service

Intermodal passenger trips - the use of more than one mode to complete a trip - occur every day as people transfer back and forth between personal automobiles, buses, airplanes, trains, bicycles, or walking. However, finding and using the modal connections, such as between an airplane and a city bus, is often time-consuming and inconvenient. At other times, the desired connections may not even be available. The alternative strategies examined in this section will outline the level of effort WisDOT should pursue to enhance modal connectivity for long distance travel.

Importance to Manufacturing

The issue of intermodal passenger service is not directly relevant to the question of further development of the manufacturing sector in Wisconsin. However, air shipments of manufactured goods are frequently and increasingly made in the cargo holds of passenger aircraft. In order for air freight services to expand in Wisconsin, it may be necessary for air passenger service to expand in the state. To the extent that intermodal passenger connections at airports can boost levels of demand for air passenger service, provision of those connections could indirectly lead to expanded air cargo service for Wisconsin manufacturers.

Importance to Agriculture

This issue is not of direct relevance to the agricultural sector in Wisconsin.

Importance to Tourism

Tourists that do not travel solely by personal automobile must travel by other modes; airplanes, trains, or busses. For these travelers, timely and convenient connections are important. If travel in Wisconsin is easy and reliable, and if the connections are seamless, then tourists will be encouraged to travel more widely and to return more often. This would lead to more sales for tourism-related businesses in the state, more employment opportunities in those businesses, and more indirect economic benefits as those businesses and their employees purchase other goods and services in Wisconsin.

Importance to Services

This issue area is directly relevant to the services sector. Businesses in this sector would benefit from policies that serve to lower their travel times and costs through greater connectivity for multimodal passenger and small package movements.

Service industry businesses vary by the type of transportation that they require. Those which serve customers outside the state or nation are heavily dependent on the interstate highway system and on airports. Businesses servicing regional needs could also benefit from passenger rail and intercity bus service. High speed rail, regular passenger rail, air travel, and mass transit usually involve some form of intermodalism to complete a trip. For example, air travelers usually rely on automobiles or mass transit to make airport connections.

Alternative Strategy #1: Provide basic infrastructure and rely on the private sector for intermodal connectivity.

This alternative focuses on the line-haul (long distance) portion of trips. Current WisDOT programs focus on the efficiency of passenger and small shipment movements by each mode. State funds support local airports, roads, and transit in order to increase the efficiency, safety, and reliability of each independent mode. Individual travelers and businesses are responsible for the coordination of movements between modes. This alternative is the continuation of those practices. WisDOT actions which could complement this strategy include: improving highway networks to increase reliability and mobility by completing the Corridors 2020 and Metro 2020 initiatives;

decreasing travel times and increasing reliability in urban and suburban areas through congestion management and integrated signal systems; helping to provide sufficient capacity at General Mitchell International Airport to accommodate growth in air services, including freight, package, and passenger movements; or extending AMTRAK service from Milwaukee to Green Bay, and from Milwaukee to Madison.

Alternative Strategy #2: Maintain and improve current infrastructure while coordinating intermodal connectivity.

Under this alternative, WisDOT would focus on total trip services. WisDOT would assist in providing and coordinating infrastructure and intermodal connectivity at trip origin and destination (different from station to station), enabling seamless, convenient, efficient movements from origins to ultimate destinations. Under this strategy, WisDOT's role in high-speed rail and expanded Amtrak is extended beyond station to station service.

WisDOT actions which could complement this strategy include: providing additional funding to local governments for Park-N-Ride facilities and insuring that the Park-N-Ride is adequately located and serviced by mass transit; or ensuring convenient intermodal connectivity to high speed rail, AMTRAK, bus, and airport facilities.

ISSUE: Strategic Highway System Improvements

Highways are an increasingly important mode of freight transportation. The intercity freight hauled by trucks in the U.S. increased by over 29% between 1980 and 1991, and the ton-miles of freight increased by over 36%. In Wisconsin, an estimated 78 million tons of intercity freight moved over the highways in 1991, over 35% of total intercity freight movements in the state. There were over 28,000 commercial truck tractors registered in Wisconsin in 1992, 33% more than a decade ago.

Highways also link shippers and receivers to the other modes. Goods are frequently moved from the shipper to a rail, water, or air terminal by truck, and later, from another terminal to the ultimate destination. The Department must optimize the highway system as one modal link in an overall transportation network of all four modes, while considering the environmental consequences and energy/fuel usage. This is the general planning perspective mandated by the 1991 Federal ISTEA legislation. In the TRANSLINKS 21 process, highway investments would be evaluated on the basis of the connectivity that they provide to rail, water, and air terminals as well as on the basis of current and projected traffic volumes. Funding priority would go to projects that provide intermodal connectivity and that optimize specific highway modal characteristics (relative to other modes). The modal characteristics of trucking (highways) are high speed; high average costs, especially over long distances; low capacity (per vehicle); high levels of environmental impact (primarily air pollution); high divisibility of capacity; and high reliability.

The key policy issue is the extent to which the Department should be actively involved in influencing the evolution of the highway network. The Department is considering a number of agendas aimed at increasing the efficiency and reliability of the Wisconsin highway network while minimizing costs to highway users. The three strategic options outlined in this section represent an escalating state involvement, both in terms of money and planning efforts, in the integration of the highway system into Wisconsin's transportation network. The first option would seek to increase the usage and efficiency of the existing highway system, while the remaining two options would extend or improve the system.

Some highway improvement initiatives that would be consistent with any strategy are discussed separately after the alternative strategies have been presented.

Importance to Manufacturing

This issue is of direct importance to the manufacturing sector. Manufacturers who use Just In Time (JIT) techniques to manage inventory costs and to minimize overall logistics costs are particularly reliant on trucking, both for the supplies they use and for outgoing shipments of their products. Intermodal movements that involve rail or water usually involve drayage by truck at the origin or the destination – or both – of the shipment.

Economic location theory indicates that, in general, a reduction in long-distance transport costs relative to short-distance costs will tend to centralize manufacturing activity. This is because manufacturers are better able to serve distant customers, thereby freeing them to concentrate activities in a few key areas where, for instance, raw materials or labor are abundant. Highway policies that tend to lower long-distance costs, such as those designed to link with major rail corridors at intermodal transfer sites or development of Interstate highways, will have a tendency to act against the economic growth of regions that have no clear advantage in some productive resource.

Importance to Agriculture

This issue is directly relevant to the agricultural sector in Wisconsin. Farmers in particular are heavily reliant upon the local, County, and even State roads that link them with their suppliers and with their customers at rail and water terminals and at food processing plants. The network of lower volume roads and highways often suffers damage during spring thaws, forcing producers to either delay shipments or to use more circuitous routes. This, in turn, increases their production costs and lowers their incomes.

Conversely, a widespread and well-constructed network of roads and bridges linking producers with their suppliers and customers will tend to lower overall shipping and production costs, thereby boosting incomes.

Importance to Tourism

Since a significant proportion of tourism in Wisconsin is by passenger automobile, this issue is of direct importance to the tourism sector of our economy. Tourists use both higher volume Interstate and State highways and lower volume roads as they travel to rural vacation spots. A highway network that minimizes travel times and costs will not only make tourist travel easier and cheaper, thereby encouraging more of it and freeing tourist dollars for other expenditures in the state, but will also encourage return visits.

Importance to Services

This issue is of direct importance to the services sector as well. Businesses in this sector rely upon contact between customer and provider. Those which serve local community needs, such as beauticians and restaurants, depend on customers who travel by automobile and busses. Businesses serving regional needs, such as hospitals and health care services, are also reliant upon good highway networks. Firms serving national and international customers are also reliant upon highways for trips between airports and rail stations to the business. WisDOT policies concerning highway improvements could help to lower service industry travel times and costs.

Alternative Strategy #1: Maximize Use of Existing Highways

Under this strategy, the Department would strive to optimize use of the existing infrastructure, keeping capital and maintenance costs low while trying to maintain current levels of service. There are several possible actions available that could potentially increase the efficiency of the existing highway network, particularly in urban areas where congestion most directly diminishes economic efficiency. These could include Intelligent Vehicle & Highway Systems/Commercial Vehicle Operations (IVHS/CVO) and Weigh-in-Motion technologies, general purpose lanes, Traffic Demand Management (TDM) programs, or evaluating the use of longer combination vehicles in selected areas and applications (see the footnote concerning longer combination vehicles at the end of this section).

Alternative Strategy #2: Extend or Improve Multilane Divided Highway System, Local Roads, and Connectors

Under this strategy, the Department would extend the backbone multilane divided highway system and the local road and connector network that provides access to multilanes. This alternative has been examined and proposed by the WisDOT as the Corridors 2020 program.

The backbone system is an approximately 1,650-mile network of interconnected high-volume highways, of which about 1,100 miles are already completed. The goal would be to complete a network of multilane highways connecting the major population and manufacturing centers of the state and to directly tie them to the national highway transportation network of Interstate and multilane divided federal highways. This action would be primarily geared toward interregional freight movements, facilitating export (from the state) and other long-range shipments by truck.

In addition, the Department could improve and extend the local road and connector network in the state in order to improve access to the existing multilane divided highway system. This network would be a 1,550-mile system of two and four-lane connector highways and local roads, of which about 70% would be high quality two-lane highways.

Some segments of this system could be expanded to four-lane divided highways when traffic volumes warranted. This approach could initially involve upgrading about 350 miles of existing two-lane facilities to multilane connector highways. In addition, this strategy could include improvements to the 1,100-mile network of two-lane connectors that would make up the largest part of this connector

system web. The goal would be to connect metropolitan and regional trade, agricultural, and manufacturing centers not currently served by the backbone multilane corridor system to that system and to each other. Most of the highway development here would involve high- quality two-lane facilities, with some four-lane divided highway segments when traffic volumes warranted them. This would facilitate intra-regional and intrastate truck movements, and would also serve longer range movements by improving access to the existing multilane divided highway system and to rail terminals and port facilities.

Alternative Strategy #3: Continually Improve Entire Highway Network In Response to Demand

The third alternative would go beyond Corridors 2020 on a selective basis. Additional highway capacity - in terms of expansions or new routes - would be provided beyond what is currently planned as traffic levels and economic activity increased. Modernization of this sort would anticipate development in urban and urbanizing areas, emphasizing coordination with projected economic development and land use plans; integration of freeway capacity strategies; timing and design with regional transit operations and with traffic demand management techniques; and a close cooperation with regional planning authorities.

Highway Initiatives Possible Under Any Strategy:

Given the ubiquity of the personal automobile and the importance of trucking in the modern economy, extensive, well-designed, and well-maintained highways can contribute to overall economic development by saving travel time and reducing costly wear and tear on motor vehicles. Policies that WisDOT might consider to improve the functioning of the highway system include:

- modernization to improve functionally obsolete interchanges and other segments of the network;
- new designs to improve the life and service of pavements;
- rebuilding certain roads in northern Wisconsin to eliminate seasonal weight restrictions;
- improving the functioning of the Milwaukee Freeway system through a variety of techniques, including traffic demand management (TDM), high occupancy vehicle lanes, improved interchanges, and selective increases in capacity.

In addition to the state highway system, Wisconsin is served by over 81,000 miles of local roads (County and town roads). The WisDOT funnels state dollars to these local facilities to support specific local economic development needs through the Local Road Improvement Program (LRIP). Economic development objectives might be more fully attained by establishing more specific rules for the use of these funds by local units of government. Such rules could specify

that improvement projects meet certain minimum economic development criteria to qualify for funding.

A Footnote: Longer Combination Vehicles (LCV's)

Current federal laws establish a maximum weight of 80,000 lbs. For tractor-trailer combinations, with a maximum trailer length of 53 feet, and a maximum overall vehicle length of 60 feet. Longer and heavier combination vehicles may offer significant fuel savings and productivity gains in some applications by carrying larger payloads per vehicle. However, these larger vehicles also have highway safety implications, could involve higher costs for highway and bridge construction and maintenance, and could draw critical business away from railroads, thereby threatening the viability of some railroads. Nonetheless, studies by the Transportation Research Board indicate that the net effect of widespread usage of LCV's may be an increase in productivity and a reduction in total shipping costs. The issue, however, is frozen at the federal level until Congress provides further direction through legislation addressing the question of widespread LCV usage.

ISSUE: Air Service

Wisconsin businesses and consumers are growing increasingly dependent on air services for passenger movements and high-value, time sensitive shipments. In 1992, nearly 7 million scheduled passengers enplaned (boarded) and deplaned at Wisconsin airports. That represents a 9.1 % increase in passenger traffic over 1991 levels and continues the trend of increased air passenger movements. Similarly, Wisconsin has experienced steady growth in air freight movements, enplaning over 60,000 tons of cargo in 1991 and increasing air freight movements by 120% between 1985 and 1991. Milwaukee's General Mitchell International Airport (GMIA) continues to enplane the majority of Wisconsin's passengers and freight. In 1992, GMIA enplaned 62% of the states passengers and 86% of its cargo in 1991.

The transporting of air cargo in the underbellies of passenger aircraft is a growing national trend which continues to influence the profitability and expansion of services in both the air passenger and freight industries. The merging of the two functions has allowed shippers and airlines to take advantage of shared fuel and facility costs, thus enabling them to boost profits and to subsidize passenger flights.

Nationally, over 50% of all air freight is carried by passenger flights and that proportion is expected to increase. Unfortunately, due to insufficient volumes of passenger traffic, Wisconsin airports are unable to provide the variety and quantity of national and international flights that would be needed to carry this proportion of the air freight originating in Wisconsin. Only a small percentage of the air freight leaving Wisconsin airports now moves by passenger aircraft.

Currently, Wisconsin lacks the necessary airport facilities and/or flight links to ship the volume of air freight generated by Wisconsin businesses. Much of Wisconsin-originated air freight now moves through Chicago's O'Hare Airport or the Minneapolis-St Paul International Airport. Wisconsin businesses are experiencing costly shipping delays caused by highway and airport congestion, and higher freight handling costs. Eliminating those delays and high handling costs could reduce these businesses' shipping costs.

Business and private passengers are hindered by the insufficient quantities and destinations of flights originating in Wisconsin. Wisconsin airports outside of Milwaukee are more apt to experience low service levels. All Wisconsin fliers could benefit from additional and more direct domestic and international flights. Part of the service shortfalls are due to ownership and operational changes by air carriers. Of particular concern is the practice of some airlines using slots at Chicago's O'Hare Airport--the major national hub-- to service long-distance routes, instead of serving feeder routes from small Wisconsin airports and other regional airports.

Importance to Manufacturing

The air freight component of this issue is most directly relevant to those manufacturing firms that ship high-value time-sensitive goods, since those are the types of shipments that most frequently move by air. More extensive air cargo service in Wisconsin could significantly reduce shipping costs and transit times, making the firms more competitive in their markets. Likewise, their competitive stance is enhanced by access to first class passenger air service which efficiently and quickly links corporate representatives and customers.

Importance to Agriculture

Although this issue is not, for the most part, of direct relevance to most Wisconsin agricultural producers, expanded air cargo services would benefit Wisconsin shippers of specialized agricultural products such as bull semen, which moves exclusively by air. In addition, Wisconsin breeders of dairy cattle and bulls often ship cattle by air to destinations in South America. Currently, those shippers must truck the cattle to Kansas for air freight service, and full air cargo service in Wisconsin would significantly reduce their overall shipping costs.

Importance to Tourism

The importance of air travel to the tourism industry is substantial. First class air service allows Wisconsin to draw more travelers to the state, and that increases economic development. Conversely, it may also increase the number of state residents traveling outside of the state, but expanded air service should make that travel more convenient and less expensive.

Importance to Services

Just as with tourism, expanded air passenger and freight services could reduce the travel times and costs of service industry businesses that serve customers outside Wisconsin. In addition, many service sector businesses routinely use express package shipping services, and those shipments usually move by air. Expanded air cargo service might marginally benefit those businesses by offering more frequent shipments, but small express package service is not now a problem to most Wisconsin firms.

Alternative Strategy #1: Navigational Aids to Enhance Cargo and Passenger Movement

In 1992, Wisconsin had 142 airports which were open to the public. Many of those facilities lacked the navigational and weather reporting equipment needed to ensure all-weather access. Lacking these facilities, passengers and shippers are unable to predict whether a flight will be able to depart or land when needed. For this reason, passengers and freight travel greater distances to use reliable airports. This increases transportation costs. This alternative could entail providing smaller airports with the navigational and weather reporting equipment necessary to ensure continuous, all-weather access to cargo and passenger flights. Approximately 100 Wisconsin airports would be eligible for this kind of program.

A potential WisDOT action which could facilitate the implementation of this strategy is to revise WisDOT's Navigational Aids System Plan to include freight transportation requirements in the list of criteria used for ranking the funding needs of airports.

Alternative Strategy #2: Expand Both Passenger and Air Cargo Service

Air cargo is increasingly being transported in the underbellies of passenger airlines in conjunction with passenger flights. This strategy recognizes that strong economic incentives are driving that trend and focuses WisDOT resources on airport facilities that would serve both cargo and passenger operations. The low marginal costs associated with shipping cargo on passenger flights makes the promotion of combined-operation airports an attractive strategy. This strategy recognizes that a proactive approach by WisDOT to expand passenger service at Wisconsin airports can concurrently serve the state's air freight needs.

Possible WisDOT actions which would support this strategy include: state involvement in obtaining additional slots at Chicago's O'Hare Airport and additional direct, non-stop flights to General Mitchell International Airport and other Wisconsin locations; assessing current and future passenger service needs at critical airports and working with carriers to provide improved service; assisting local airports with the construction of additional runways, terminals, and freight storage and handling facilities; or assisting in the construction of a new combined passenger and air cargo facility.

Alternative Strategy #3: Dedicated Air Cargo Facilities

Under this alternative, WisDOT focuses on the development of air cargo airports which would not accommodate passenger air service. Responsibility for passenger air service expansion would be left to the airline industry, which specializes in service demand analyses. Specialized air cargo facilities could take advantage of the specialization of skills associated with a single function facility.

Possible WisDOT actions under this strategy could include: assisting communities in transforming local airports into all-go airports; or assisting local communities or private sector investors in constructing all-cargo airports.

ISSUE: Retention and Improvement of Port Service

Shipping of bulk commodities, steel, and extremely large machinery out of and into Wisconsin is particularly suited to water, both by barge on the Mississippi River and by Great Lakes freighter and lake barge. More than 46 million tons of freight moved through all Wisconsin ports in 1989. Bulk commodities include grain, fertilizer, salt, and coal. Wisconsin's agricultural sector is reliant on Mississippi River shipping for grain - primarily corn - that is exported. Between 1989 and 1991, grain shipments from the Port of Prairie du Chien, a major grain shipment point in Wisconsin, grew by 15% each year.

Great Lakes shipping has declined somewhat over the last decade, but shipping on the Mississippi River has increased as grain exports have risen. Between 1979 and 1989, tonnage of all cargo shipped on the Mississippi River increased by over 12%, but the ton-miles of cargo increased by over 29%. This reflects the fact that water shipping is most efficient over longer distances: while the weight of water-borne cargo has been increasing, the total distance moved by the cargo has increased even more sharply. Another development that presages even greater levels of water-borne commerce in the years to come is the recent opening of direct barge service from Milwaukee to the Gulf of Mexico via the Illinois River.

Increased grain exports can be expected to continue, especially as the North American Free Trade Agreement is implemented. In addition, coal is a particularly critical bulk commodity that can be shipped by water because it is used to generate electricity, which is a basic cost of any manufacturing process. Any savings on coal transport could eventually be realized as lower production costs across a broad spectrum of industries. How can the WisDOT best promote adequate port facilities on the Great Lakes and Mississippi River?

Importance to Manufacturing

This issue is directly relevant to the manufacturing sector in two ways. First, those manufacturing firms that ship large machinery, steel, or oversized paper rolls by water are dependent upon adequate and efficient ports to handle their exports (from the state) as well as their shipments of supplies from abroad. Those firms are almost exclusively export and high value-added businesses, and are important to the economic health of Wisconsin. Minimizing their overall shipping costs allows them to increase profitability and sales, and/or to expand their market shares. This, in turn, could allow them to expand employment and consequently, incomes in Wisconsin.

The second way in which this issue impacts upon manufacturing in the state is due to the fact that coal is frequently shipped by water. This coal is used to generate electricity, both by Wisconsin utilities and by large manufacturers with their own electrical generating capacity. Large quantities of coal are received, for instance, at the ports of Green Bay and Milwaukee, as well as at other smaller locations on Lake Michigan. Reduced coal shipping costs can lead to cheaper electrical power, which is a basic cost for nearly every manufacturing operation.

Importance to Agriculture

This issue is of great importance to the agricultural sector. Wisconsin agricultural producers are reliant upon Mississippi River ports for barge shipping of grain, primarily corn, out of the state, and for shipments of fertilizer into Wisconsin. They also rely upon port services at the Port of Milwaukee for exports of agricultural products, again primarily corn. Profit margins in this sector tend to be slim, and reductions in shipping costs through improved port services can be significant to the profitability of Wisconsin agricultural producers.

Importance to Tourism

Although not nearly as important to the tourism sector as to the agriculture sector, port services are important for tourist travel by car ferries. In addition, ferries and riverboats can themselves be tourist attractions, and require adequate ports to service them. In this regard, port services would need to be adequate not only for commercial freight and commodity shipping, but for passenger vessels as well.

Importance to Services

This issue is not of direct importance to the services sector in Wisconsin.

Alternative Strategy #1: Maintain the existing infrastructure

Under this strategy, the Department could continue the existing Harbor Assistance Program, expanding it to include not only maintenance of dockwalls, but also landside facilities such as access roads, rail connections, and intermodal transfer improvements, with the goal of preserving existing levels of service. As it does currently, the program could respond to applications from port operators for funding, and improvements would be undertaken entirely at operators' initiative.

Alternative Strategy #2: Guide the maintenance of existing infrastructure

Under this strategy, the Department could expand the types of projects eligible for the Harbor Assistance Program as above, and provide higher priority and higher levels of funding for projects that are consistent with the Department's harbor plan and Intermodal System Plan.

Alternative Strategy #3: Maintain existing ports, and let communities purchase & operate harbors.

This strategy would represent the greatest degree of public involvement. It could entail the expansion of the Harbor Assistance Program as above, and also establish a program wherein communities (such as counties, municipalities, or regional authorities) could apply for funds to convert an entire harbor to public facilities for commercial cargo operations. This could help stem the tide of conversions of harbors from cargo ports to purely recreational harbors for pleasure craft. It would enable communities to upgrade harbor facilities and generate revenues from their commercial cargo operations while retaining local control over the harbors.

ISSUE: Retention and Improvement of Freight Rail Service

Rail freight service in Wisconsin is central to the efficient movement of bulk commodities such as grain, coal, stone and clay, fertilizer, and salt. In addition, manufacturers can efficiently move manufactured products over long distances by rail, particularly when containerized rail service is integrated into intermodal movements that combine it with truck drayage. Total tonnage of freight moved by rail into and out of Wisconsin increased by 39% between 1981 and 1991, with over 59 million tons of freight moving by rail in 1991.

Coal is an important bulk commodity moved by rail (as well as by water) because it is used to generate electricity, which constitutes a basic production cost in virtually every manufacturing process. Consequently, any coal transport cost savings can be passed on and realized as manufacturing cost savings. During the same period noted above, 1981-1991, coal tonnage shipped by rail more than doubled.

However, railroads are expensive to build and maintain, and they have experienced fierce competition from trucking. Between 1970 and 1990 over one-fifth of the total trackage that existed in Wisconsin was abandoned as major carriers shed low-volume and unprofitable lines. In addition to this trend, the major railroads sold many marginal lines to newly-formed regional and short-line railroads. Consequently, over half of Wisconsin's rail network is operated by regional and short-line carriers. How can the WisDOT ensure that there are adequate levels of rail service throughout the state to support exports, business growth, and economic development in Wisconsin?

Importance to Manufacturing

This issue is of direct importance to the manufacturing sector in Wisconsin. Intermodal movements of manufactured products, both into and out of the state, are increasingly important for shipments over medium to long distances. Those movements rely upon rail service for the line haul portion of the trip, and the shipping cost savings are derived from that line haul segment. Many shipments go directly onto rail cars at the point of origin (such as a manufacturing plant). In addition, some manufacturing firms are beginning to use rail service in their Just In Time (JIT) manufacturing processes as rail service improves, and rail facilities that are extensive and in good repair are essential to those applications. Finally, much coal is shipped to electrical generating plants by railcar, and any reduction in coal shipping costs can result in cheaper electrical power, which is a basic cost of virtually all manufacturing processes.

Importance to Agriculture

This issue is also directly relevant to the transportation needs of the agricultural sector in Wisconsin. Bulk agricultural commodities such as grain and fertilizer are often shipped by rail as well as by water, and the transportation cost savings that rail offers over trucking for those shipments are substantial. Large shipments of corn, for example, can be moved by train for about half the price it might cost to ship by truck. Intermodal connections between waterborne agricultural shipments and railroads are common, as are connections between truckloads of agricultural products and rail: rail service is an integral link in these important intermodal movements.

Importance to Tourism

This issue is not of direct relevance to the tourism sector. However, as was noted in the section of this paper on Intermodal Freight Transfer Facilities, to the extent that freight traffic moves by rail instead of by truck, highway congestion is alleviated, particularly in urbanized regions such as southeastern Wisconsin.

Importance to Services

This issue is of negligible direct relevance to the services sector in Wisconsin. Indirect relevance is the same as noted for tourism above.

Alternative Strategy #1: Let the rail system develop through private initiative

Under this strategy, the Department could leave line, routing, investment, and service decisions to private rail operators following the dictates of the marketplace. So that those private decisions might accurately reflect true social costs and tradeoffs between different modes, the Department could take steps to ensure that all highway users pay their full share of the cost of the public highways that they use.

Alternative Strategy #2: Preserve existing rail infrastructure through WisDOT rail funding programs

Under this strategy, the Department could administer rail programs with a goal of preserving existing levels of service. These programs would allow the Department to loan funds directly to railroads, as well as to acquire and preserve rail lines that might otherwise be abandoned.

Alternative Strategy #3: Preserve and improve service through existing WisDOT rail funding programs

Under this strategy, the Department could administer current rail programs, the Freight Railroad Preservation Program and the new Freight Railroad Infrastructure Improvement Program, with a goal of preserving existing levels of service and increasing the level of service on rail lines where warranted.

Alternative Strategy #4: Preserve and expand service through aggressive state acquisition of entire rail systems

Under this most active strategy, the Department could aggressively acquire all track and other fixed assets from freight railroads in the state, and enter into non-exclusive leases or franchises with multiple railroad companies to operate the systems.

ISSUE: Direct Consideration of Tourism Benefits in Transportation Projects

Wisconsin's economic development is enhanced by tourism. Travelers in Wisconsin spent almost \$5.5 billion in 1992, supporting over 150,000 jobs (full-time equivalents), and generating close to \$3 billion in income for Wisconsin residents. Tourism will continue to be an important element in Wisconsin's expanding economy.

The alternative strategies below outline possible approaches to the evaluation of transportation projects that would take the economic benefits of tourism into account. Of course, transportation improvements that encourage tourism will also improve the transportation network for all users regardless of travel purpose.

Importance to Manufacturing

This issue is not of direct relevance to the manufacturing sector in Wisconsin. However, when transportation projects compete for limited funds, some projects conducive to tourism may not offer any benefits to commercial traffic, and in those instances consideration of tourism benefits could be at odds with a concern for direct benefits to freight shipping.

Importance to Agriculture

Same as with manufacturing above.

Importance to Services

Many of the transportation needs of the services sector parallel those of the tourism industry. For example, the issue of connectivity between various passenger modes of travel (which is considered in the section titled "ISSUE: Intermodal Passenger Service") is important to both tourist travel and to the travel of professionals in various service businesses.

Alternative Strategy #1: Pursue tourism-enhancing projects that meet standard transportation efficiency criteria

Current WisDOT planning places emphasis on travel time and cost minimization, safety maximization, and environmental responsibility. WisDOT plans the network according to present and projected traffic flows. As such, tourists, sales people, commuters, and other users are lumped into system travel projections. According to this strategy, WisDOT would continue to use the standard efficiency criteria to evaluate projects, but would seek to identify projects to enhance tourism.

Possible WisDOT actions which might complement this strategy could include: completing the Corridors 2020 and Metro 2020 initiatives to improve highway access to the major tourism areas of the state; or identifying innovative means for efficiently improving multimodal transportation access (air to rail to bus connections, for example) to tourism areas in the state.

Alternative Strategy #2: Include tourism benefits in criteria that rank possible alternative projects

At times, transportation network improvements can be of marginal efficiency from a transportation standpoint, but the benefits to the state make the project worthwhile. This is one reason why WisDOT assigns economic development values when setting priorities for major highway projects. The cost of the project is weighed against the project's economic development value, transportation benefits and other factors in order to determine its desirability. The strategy considered here expands the concept of adding economic development value to transportation benefits for projects other than major highways.

Alternative Strategy #3: Pursue transportation-related projects that promote tourism but have limited transportation benefits

This strategy recognizes that some tourism related projects may have few transportation benefits, but that other benefits (jobs, revenue, recreational choice,) may justify their undertaking.

Possible WisDOT actions which might complement this strategy could include: promoting ferry service for both transportation and tourism benefits; or promoting and funding programs of memorial and designated routes, including the Great River Road, Rustic Roads, the Great Lakes Circle Tours, and the Kettle Moraine Scenic Drive.

CHAPTER 3: TRANSPORTATION NEEDS AND DIRECT EMPLOYMENT OPPORTUNITIES

BACKGROUND: EMPLOYMENT OPPORTUNITIES AND TRANSPORTATION

Nationally, total suburban population has exceeded total city population since 1970 and, over the same period, suburbs have experienced the majority of job growth. It is clear that employment opportunities have migrated outward from cities to the metropolitan periphery. The purpose of this chapter is to examine strategies the WisDOT may propose in response to the dispersion of population and employment to the metropolitan periphery. The alternative strategies are extensions of programs adopted in the mid- and late 1980's. The first set of strategies addresses the issue of formulating transportation programs to expand and improve the working of the labor market in Wisconsin. The second set of strategies addresses the issue of how to most effectively provide transportation improvements to businesses to induce them to locate, remain, or expand in Wisconsin.

Transportation and the Labor Market

Although population and employment growth have been greatest in the suburbs, a subset of the population, generally minorities and lower-income individuals, were "left behind" in the central cities. A number of approaches have been tried to respond to the lack of employment opportunities and associated poverty in inner cities. For example, enterprise zones attempt to induce firms to locate in inner cities, thereby bringing jobs to workers; housing programs attempt to enable inner-city residents to obtain housing in suburban areas, thereby bringing workers to job locations. Mobility initiatives differ from other employment strategies in that they do not require relocation of either firms or workers: they simply provide transportation from areas lacking employment opportunities to areas where job opportunities exist.

Mobility initiatives support economic development by enabling transportation-disadvantaged individuals to participate in labor markets from which they were previously excluded by a lack of transportation. In addition, mobility initiatives support economic development by enabling firms to increase employment, i.e., to fill jobs that would otherwise remain vacant for lack of workers. Essentially, mobility initiatives increase the size of the labor markets in which job seekers look for work and from which employers hire workers. The greater supply of workers enables businesses to more closely fill their labor needs and, in some instances, increase their production, sales, and profits. Thus, mobility initiatives can benefit employers through increased outputs, sales, and profits as well as workers through increased wage or salary incomes.

In general, public transit serves as a labor mobility program. However, traditional fixed-route mass transit is sometimes unable to effectively reach all job destinations or workers. In Wisconsin, the Employment Transit Assistance Program or "Job Ride" was enacted in 1989 specifically to provide unemployed, underemployed, or discouraged workers temporary transportation assistance from the inner city to workplaces not adequately served by public transportation.

Transportation and Business Location/Expansion/Retention

Intense competition for jobs among nations as well as among states has induced many state transportation departments to incorporate economic development in their transportation planning. The objective of WisDOT's special economic development initiative, the Transportation Economic Assistance (TEA) program, is the creation of new jobs or retention of existing jobs within Wisconsin by building transportation improvements at specific sites. This program was enacted in 1987 to fund localized transportation improvements needed to create new jobs or retain existing ones.

The TEA program affects the demand side of labor markets -- the program is intended to influence firms' hiring decisions via their location and transportation cost decisions. WisDOT does not create or act to retain jobs directly; instead, the department facilitates private firms' efforts to achieve these goals. In essence, the program attempts to create conditions under which firms will choose to locate or remain in Wisconsin and employ Wisconsin residents.

The TEA program aims to reduce firms' transportation costs. Lower costs are incentives to firms to locate or expand at transportation-improved sites because they enable firms to produce more efficiently and compete more effectively. Increased efficiency implies that firms are likely to increase employment, output, market share, and profitability. The most immediate beneficiaries of transportation improvements are owners (i.e., shareholders) and employees whose profit and wage incomes increase. Other beneficiaries include the communities in which the enhanced incomes are spent, and local, state, and federal governments that collect increased tax revenues. Customers of firms producing at transportation-improved sites also benefit when reduced transportation costs are reflected in lower prices or faster response times.

Most retail jobs do not qualify for TEA funding because of the requirement that such assistance not result in transfers of existing jobs among regions or firms within the state. Transportation projects to benefit specific retail firms are not approved because individual retail firms generally participate in markets so small that gains by one firm imply losses by other, existing firms.

ALTERNATIVE STRATEGIES TO ADDRESS THE TWO ISSUES

Strategies considered in this section focus on increasing the efficiency of labor markets, and on job creation and retention. One set of alternative strategies is designed to promote economic development by increasing employment among transportation-disadvantaged individuals and to ameliorate labor shortages through public transit initiatives, including the Job Ride program. The alternative strategies in this set differ in terms of whether they would be applicable only in selected areas or statewide, and whether they have an employee, employer, or public transit operator orientation.

A second set of alternative strategies focuses on the TEA program. TEA projects have an inherent and unavoidable element of risk because they involve future events. Greater employment gains might be realized if WisDOT were willing to participate in riskier TEA program transportation improvements. There are two sources of risk. On the one hand, there

is the risk that WisDOT may provide transportation improvements and an applicant may renege on its agreement. On the other hand, potential jobs may be foregone because transportation improvements were not made and, consequently, firms did not locate or remain in Wisconsin. Possible strategies to guide the TEA program are designed to balance these two types of risk so as to gain the greatest amount of new employment while incurring the least risk of state funds.

ISSUE: Labor Market Mobility and Public Transit

Alternative Strategy #1: Continue the Job Ride program at its current funding level and focus on inner-city unemployment in Milwaukee

The Job-Ride program is maintained at its current funding level and focus. This "inner-city focus" alternative implies that Job Ride would continue to provide vanpool services to targeted transportation-disadvantaged individuals from Milwaukee's inner city to workplaces in the greater Milwaukee metropolitan area.

Alternative Strategy #2: Expand the Job Ride program to metropolitan areas statewide

Additional Job Ride programs would be established to serve the transportation-disadvantaged in metropolitan areas across the state. The "statewide expansion" strategy would entail replication of the current Job Ride program in other metropolitan areas. Expenditures would likely increase in direct proportion to the number of additional vans provided.

Alternative Strategy #3: Develop more widely-focused transportation assistance

Employers could request transportation assistance to alleviate shortages of workers. In addition, local public transit operators could request assistance to serve developing employment centers that are not yet generating sufficient traffic to enable operators to extend service to those destinations. Additional initiatives under this alternative might include state-assisted vanpool subscription services (either privately or publicly-operated), and WisDOT coordination of employer transportation management associations. The Department would develop criteria to document the existence, magnitude, and cause of such needs. In addition, the Department would develop a range of options to respond to documented labor market transportation needs. These options would range from technical assistance in setting up ridesharing programs to creation of public-private partnerships under Job Ride, and even to establishment of fixed routes where justified. In contrast to the first two alternative strategies, this one focuses on employer needs as well as employees. Adoption of this alternative strategy would not preclude adoption of either of the first two.

ISSUE: Transportation Economic Assistance (TEA) Program

Alternative Strategy #1: Maintain stringent eligibility requirements for assistance under the TEA program.

Currently, the Department participates only in very low-risk economic development projects to minimize the risk that transportation improvements do not result in employment increases. The Department minimizes this risk by requiring commitments of matching funds, from either local governments or prospective employers. In addition, private firms are required to locate at specific sites and to hire certain numbers of workers within specified periods of time. Finally, if private firms do not achieve employment targets within specified time periods, local governments are required to guarantee reimbursement of the Department's costs.

Current eligibility requirements for TEA assistance are among the strictest of those states having similar programs. The eligibility requirements are designed to minimize the likelihood that the Department will spend tax dollars on projects that do not result in employment gains. These requirements may preclude expenditures on employment producing projects which local governments are not willing or unable to guarantee.

Alternative Strategy #2: Develop flexible eligibility requirements

TEA eligibility requirements would be relaxed to allow participation in higher-risk projects than are allowed under current rules. The purpose of Alternative Strategy #2 is to increase the number of jobs created or retained over current levels by increasing the flexibility of eligibility requirements.

The flexible eligibility alternative might be implemented by any of several actions: (1) allowing local governments or private firms to provide less than 50% matching funds, (2) waiving requirements for agreements with specific private firms to locate at specific sites, (3) waiving requirements for agreements with specific private firms to hire certain numbers of workers, (4) waiving requirements that local governments reimburse the Department when private firms are unable to meet their employment goals, or (5) changing the types of transportation improvements eligible for TEA assistance.

CHAPTER 4: ECONOMIC DEVELOPMENT ALTERNATIVES

INTRODUCTION

In this chapter, the transportation strategies examined in this paper will be grouped into four alternative packages which are designed to promote economic development in Wisconsin. There are many possible policy questions that could be encountered in the near future. Some examples of important issue areas to incorporate into these strategy packages include: intermodal transfer facilities, highway improvements, air service improvements, port service improvements, rail service improvements, and tourism. These issue areas affect one or more of the major sectors of the Wisconsin economy: manufacturing, agriculture, tourism, or services. In addition, the issue areas include those designed to reduce transportation-related unemployment as well as to create and retain jobs in the State.

The four alternative packages presented for discussion include:

Alternative #1: Wisconsin's future transportation system is driven primarily by market choices, with most public revenues and programs directed toward highway improvements. Economic development priorities are the primary factor in transportation decisions.

Alternative #2: Wisconsin's transportation systems and policies remain largely as they are today. Highways remain the dominant mode of travel in Wisconsin. On a modest basis, more revenues are invested in complementary modes such as transit, freight and passenger rail, airports, harbors, and bicycle facilities where they are appropriate and cost effective.

Alternative #3: While highways remain the primary mode of travel, a much wider range of transportation options is developed and enhanced in all areas of the state, supplementing highways as a travel choice. Environmental protection and travel choice, along with economic development, receive more emphasis.

Alternative #4: Wisconsin's transportation decisions are shaped largely by environmental and social values. State regulations and pricing changes are implemented to reduce auto and truck travel and greatly expand or enhance urban and rural transportation modes, and to shift freight movements from truck to rail.

RELATIONSHIP OF ISSUE AREAS TO THE ALTERNATIVE STRATEGY PACKAGES

The various strategies that were identified in Chapters 2 and 3 for each major issue area can be grouped into packages of strategies that are consistent with these four alternatives. These groupings are presented here as a basis for discussion; it is expected that the ultimate selection of strategies may include other elements identified during the TRANSLINKS 21 process.

ALTERNATIVE #1

The Department assumes that private investors, motivated by potential profits, are best qualified to evaluate the demand for intermodal freight transfer facilities. Profits are viewed as sufficient

incentives for private investors to create these facilities, and the network evolves independent of WisDOT involvement.

The Department provides the basic infrastructure for the line-haul portion of passenger trips, and leaves development of intermodal passenger connectivity to the private sector as it responds to profit opportunities.

With regard to highways, the Department extends the multi-lane backbone system and the system of connector highways as outlined in the Corridors 2020 plan. In addition, the Department strives to continually improve both road systems in response to the forces of private economic development and the public demand for roads. Highway programs would increase from current levels.

The Department provides navigational aids to airports lacking such aids. These aids reduce transportation costs by making assisted airports more accessible and shipments more reliable.

The Department leaves line, routing, investment, and service decisions to private rail operators responding to the dictates of the marketplace. To ensure accurate signals from the marketplace, the Department institutes measures to induce highway users to pay the full costs of that mode.

ALTERNATIVE #2

The Department fosters development of intermodal transfer facilities through participation in public-private partnerships by awarding grants or loans for construction.

The Department extends the multi-lane backbone system and the system of connector highways as outlined in the Corridors 2020 plan. These extensions improve the accessibility of all localities to the state system and the state system to the national transportation network. Transportation systems and policies remain largely as they are today, although funding for other modes is increased gradually where it is cost-effective and appropriate.

The Department recognizes that air cargo is increasingly being transported in the underbellies of passenger aircraft as well as in cargo aircraft. The Department assists in the construction of combined passenger-air cargo facilities. Moreover, the Department assists in construction of runways, terminals, and package storage and handling facilities.

The Department expands the existing Harbor Assistance Program to include not only maintenance of dock walls, but also land-side facilities such as access roads or rail connections. This option is designed to preserve existing service levels for agricultural products and other bulk commodities. Assistance for improvements is made in response to applications by port operators for aid.

Currently, the Transportation Economic Assistance (TEA) program provides funding only for economic development projects that minimize the risk to the Department that transportation improvements will not result in employment increases. The Department's exposure to risk is minimized by funding only projects meeting strict eligibility requirements.

The Department administers the Freight Railroad Preservation Program and the Freight Railroad Infrastructure Improvement Program to preserve current service levels. These programs allow the Department to lend funds directly to rail operators for new rails and equipment.

Current Departmental policy provides for an open transportation network for all users, regardless of purpose. The Department continues to use efficiency criteria to evaluate projects but also seeks to identify projects of particular benefit to tourism.

The Job Ride program continues to assist inner-city residents of Milwaukee find employment in the Milwaukee suburbs by providing van pools.

ALTERNATIVE #3

WisDOT continues to develop an extensive highway network as now envisioned in the Corridors 2020 plan, supplemented by a wider range of transportation options as the network is completed. Highway programs would not increase beyond the Corridors 2020 level.

The Department focuses on development of all-cargo airports, including transforming some small, local airports into all-cargo facilities, or assisting private investors or local governments in constructing all- cargo airports.

Transportation Economic Assistance eligibility requirements are made more flexible to allow participation in higher-risk projects than are currently allowed. Flexible eligibility requirements are intended to reduce the numbers of jobs lost to other jurisdictions or not created in Wisconsin by increasing the number and types of projects qualifying for assistance under the TEA program.

The Department expands the types of projects eligible for the Harbor Assistance Program and increases funding and priority for projects consistent with the Department's harbor plan and Intermodal System Plan. In addition, the Department establishes a program wherein local governments can apply for funds to convert harbors to public facilities for commercial cargo operations.

In addition to the current policy of assigning economic development values when setting priorities for major highway projects, the Department assigns economic development benefits for other projects. Furthermore, the Department pursues some projects that promote tourism although they have limited economic development benefits.

The Job Ride program is expanded to serve the transportation-related unemployed in all metropolitan areas of the state. Moreover, the Department develops a range of assistance alternatives to respond to requests from employers and public transit operators for assistance in transportation-related employment problems.

ALTERNATIVE #4

The Department analyzes freight movements and determines feasible locations for intermodal transfer facilities, and constructs or operates them as public facilities.

The Department attempts to optimize use of existing highway infrastructure, keeping capital and maintenance costs low. State highway programs would be cut back, with no planned expansions.

The Department works to preserve existing rail services through current rail programs. In addition, the Department owns rail lines and contracts with private firms for their operation.

The Department focuses on total passenger trip services by providing and coordinating passenger intermodal connectivity at trip-ends. In addition, the Department's role in high-speed rail and AMTRAK is extended beyond station-to-station service.



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