

# INDOT 2030 Long Range Transportation Plan

## Freight Transportation

### Overview

Indiana is a logistics state. The central location of Indiana below the Great Lakes, places Indiana at the crossroads of the nation for freight movements both serving the Indiana economy and moving commodities through the state. In 2006 INDOT created an Office of Freight Mobility to oversee and coordinate freight planning and programs within the department. In 2007 the Office of Freight Mobility will conduct a multimodal planning study to direct the state's future freight policy and provide a framework to guide future freight decisions regarding transportation investments. This study will use the systems planning tools of the statewide commodity flow model and the improved statewide travel demand models freight truck simulation, as discussed in other sections of the plan documentation, to analyze the system and evaluate alternatives.

#### State Freight Movement Profile

In order to effectively plan for freight movement in Indiana, it is important to first understand the underlying market forces that drive goods movement, and how freight currently uses the State's freight transportation system to move between origins and destinations. Information on the flow of commodities into, out of, and through Indiana is available from a variety of sources, including a detailed documentation of internal Indiana flows prepared by Dr. William R. Black, of Indiana University, and the national "Freight Analysis Framework" (FAF) dataset compiled by the Federal Highway Administration (FHWA). Interviews were also conducted with freight stakeholders to determine system strengths and challenges.

#### Total Volume of Goods Moved

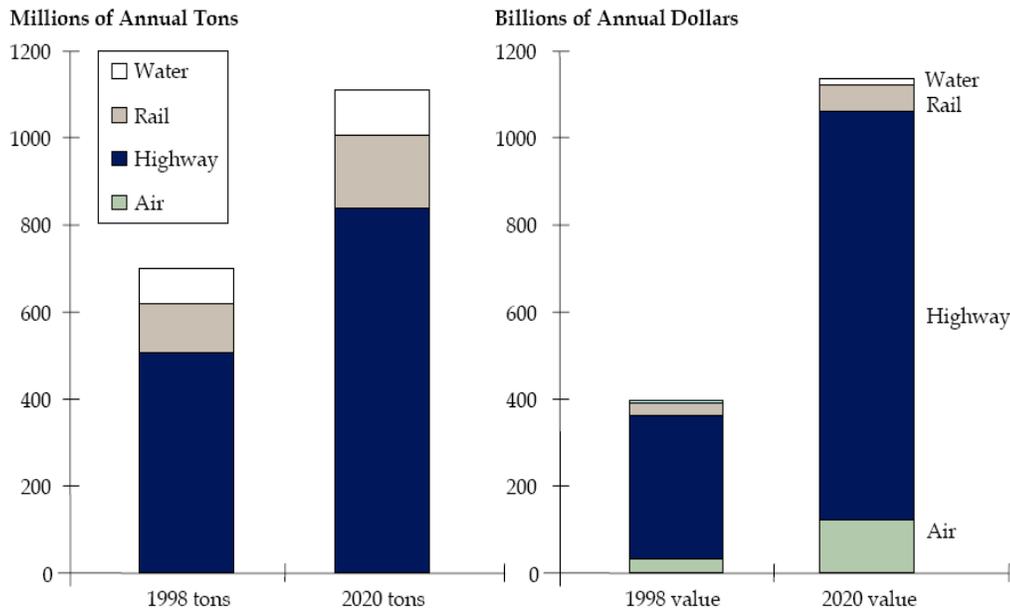
In 1998, approximately 698 million tons of freight moved to, from, or within Indiana, representing roughly \$398 billion worth of goods in transit. The State is forecast to experience dramatic tonnage growth of nearly 60 percent over the next 20 years. By 2020, roughly 1.11 billion tons (\$1.14 trillion) of freight is expected to use Indiana's freight network.

#### Mode Split

**Figure 8-1** shows a breakdown of 1998 and forecast 2020 freight flows by mode, including both shipped weight and value. Truck traffic moving on the highway system is the dominant mode of freight shipment, carrying nearly 73 percent of all freight tonnage, and 84 percent of all value. Rail freight serves an important role as a bulk transportation mode, transporting 16 percent of all freight tonnage, but only seven percent of value. Waterborne barge traffic serves an even more niche market of bulk traffic, with more than 11 percent of weight, but less than two percent of value. Airfreight serve the opposite niche of high-value and time-sensitive goods, carrying less than 0.1 percent of the State's traffic by weight, but nearly eight percent by value.

Looking forward to 2020, the mode split for freight traffic is expected to shift slightly to favor trucking and airfreight over rail and maritime freight. The percentage of weight carried by trucks and planes is anticipated to increase to 75 and 0.1 percent, respectively. At the same time, the weight mode share of rail

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**Figure 8-1**

and barge traffic is forecast to decline to 15 and nine percent, respectively.

**Major Commodities Moved**

By weight, the top commodities moved in Indiana in 1998 were:

- Non-Metallic Minerals (191 million tons);
- Coal (80 million tons);
- Farm Products (64 million tons);
- Primary Metal Products (60 million tons); and
- Secondary Traffic (47 million tons).

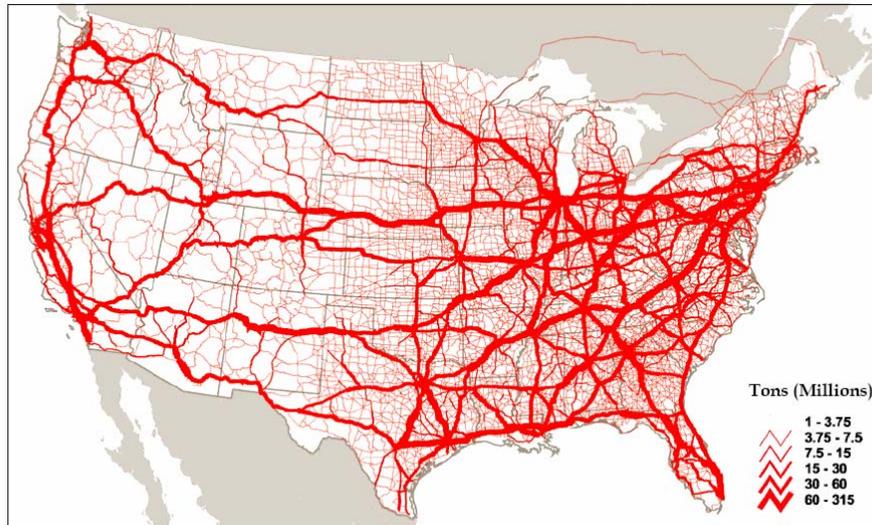
By value, the top commodities were:

- Transportation Equipment (\$66 billion);
- Secondary Traffic (\$48 billion);
- Primary Metal Products (\$48 billion);
- Freight All Kinds (\$37 billion); and
- Chemicals (\$31 billion).

The same commodities are expected to dominate future freight movements in Indiana. The dominant commodities suggest that there are four industries in Indiana that are particularly intensive users of the State's freight system. Non-Metallic Minerals and Coal are both associated with the mining industry. Primary Metal Products, Transportation Equipment and Chemicals are all associated with the Manufacturing sector. Secondary Traffic and Freight All Kinds both represent shipments of consumer goods, and thus have a strong tie to the retail sales business. Finally, Farm Products are part of the agricultural sector. Therefore, in gathering market research on the State's freight transportation, we focused on input from the agriculture, mining, manufacturing and retail industries.

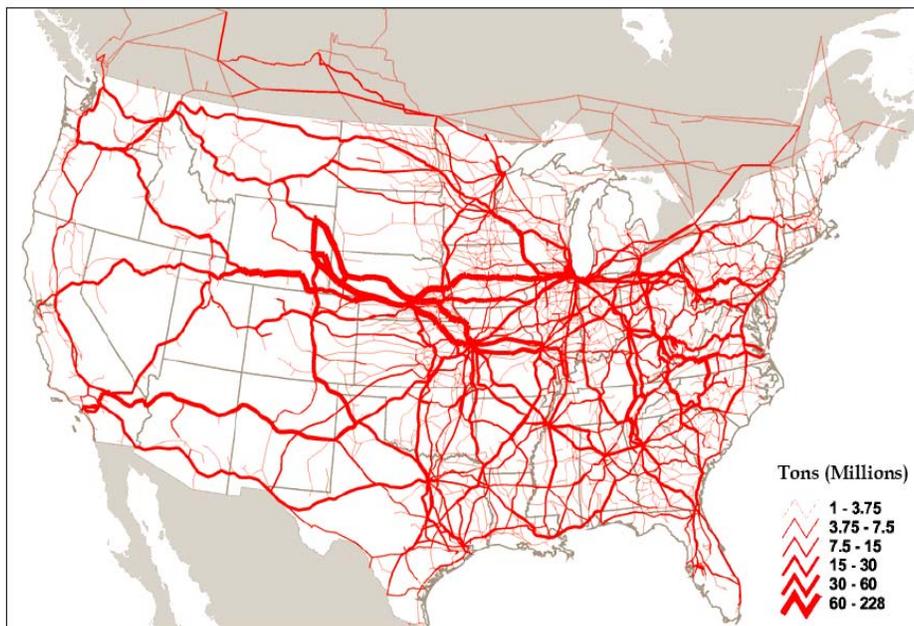
### Through Freight Traffic

In addition to generating a significant volume of freight traffic, Indiana is also a major gateway in our Nation's heartland for through traffic moving between the Western, Mountain and Midwestern states, and the Northeast. **Figures 8-2 and 8-3** show national truck and rail tonnage distributions, and illustrate the large through flows of "land bridge" freight traffic that uses Indiana's rail lines and roadways. Preliminary results from the FAF dataset suggest that as much as one-third of the freight on Indiana's transportation network passes through the State without stopping. This makes through carriers a significant stakeholder in the State's freight system.



Source: Reebie TRANSEARCH and FHWA Freight Analysis Framework Project

Figure 8-2 National Freight Truck Traffic



Source: Reebie TRANSEARCH and FHWA Freight Analysis Framework Project

Figure 8-3 National Freight Rail Traffic

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### MAJOR FREIGHT FACILITIES/INFRASTRUCTURE

Indiana enjoys a wide selection of freight movement choices, due to its abundant transportation infrastructure and broad modal options. The following section briefly describes the major components of the State's freight transportation system, categorized by mode.

#### Highway

Indiana has an extensive network of major roadways that provide truck access across the State. The truck freight network is composed of: interstate highways, U.S. highways, state routes and other primary arterial roadways, county roads and other secondary and local arterials.

*Interstates* – Indiana's interstate highways provide the major backbone for high-volume goods movement around the State. There are four major east-west interstate corridors across: the northern portion of the State (I-80/90), the central portion (I-70 and I-74) and the southern portion (I-64). Indiana has one major north-south interstate (I-65) that connects Chicago, Illinois to Louisville, Kentucky through Indianapolis. I-69 connects Fort Wayne and the northeast corner of the State with Indianapolis, but does not yet continue south to provide a complete north-south corridor across the State. In 2008, however, new construction to complete I-69 in Indiana will commence. This segment represents a major building block in the completion of the "NAFTA (North American Free Trade Agreement) Highway". Indianapolis serves as a major hub of the State's Interstate network, with I-65, I-69, I-70, I-74, and the I-465 circumferential highway all intersecting in Marion County.

*Primary Arterials* – Indiana's network of U.S. highways and major state routes form a rough grid of north-south and east-west routes, and fill in many of the gaps between Interstates. Major north-south corridors include: U.S. 27, U.S. 31, U.S. 41, U.S. 231, U.S. 421, S.R. 3, and S.R. 37. Major east-west corridors include: U.S. 24, U.S. 25, U.S. 30, U.S. 50, and S.R. 46. The physical configuration of these roads varies greatly; some are limited access highways, while others are two-lane local streets. Taken as a combined network, however, they serve to connect all of the State's major population centers.

*Other Freight Roadways* – This network of local roads provides the "last mile" connection to major freight generators in population centers, and connect less populated areas into the State's truck network. In urban areas, these links are composed of local streets, while in outlying areas they are generally rural roads.

#### Air

Indianapolis International Airport is a major operational hub for FedEx and the United States Postal Service. In this role, it dominates the State's share of airfreight traffic and has the 8<sup>th</sup> highest volume in the U.S. There are, however, 12 other commercial airports in Indiana that provide airfreight opportunities for freight movement through either local air carrier service or passenger airline belly cargo.

#### Rail

Indiana is served by four Class I rail carriers, and 37 regional and short-line railroads (see **Figure 8-4**). A brief description of the major rail lines is presented below. INDOT's Indiana Rail Plan provides more detailed information on the State's rail system, including 2002 traffic volumes, and an evaluation of the current market sustainability of short-line track routes. See Chapter 4 Multimodal Coordination for more information on the Rail Plan.

*CSX Transportation Inc. (CSXT)* operates 1,929 route-miles of track in Indiana, and maintains a series of major trunklines, including the following.

- Two parallel east-west corridors connecting Chicago, Illinois, and Gary to Northern Ohio. The northern route carries most of the through traffic, while the southern route passes through Fort Wayne, Indiana.
- An east-west corridor from St. Louis, Missouri to Northern Ohio, serving Terre Haute, Indianapolis, and Muncie.
- An east-west corridor connection between St. Louis, Missouri to Cincinnati, Ohio through

Vincennes and southern Indiana.

- A north-south corridor that straddles the Illinois/Indiana border, and passes through Terre Haute, Vincennes, and Evansville.

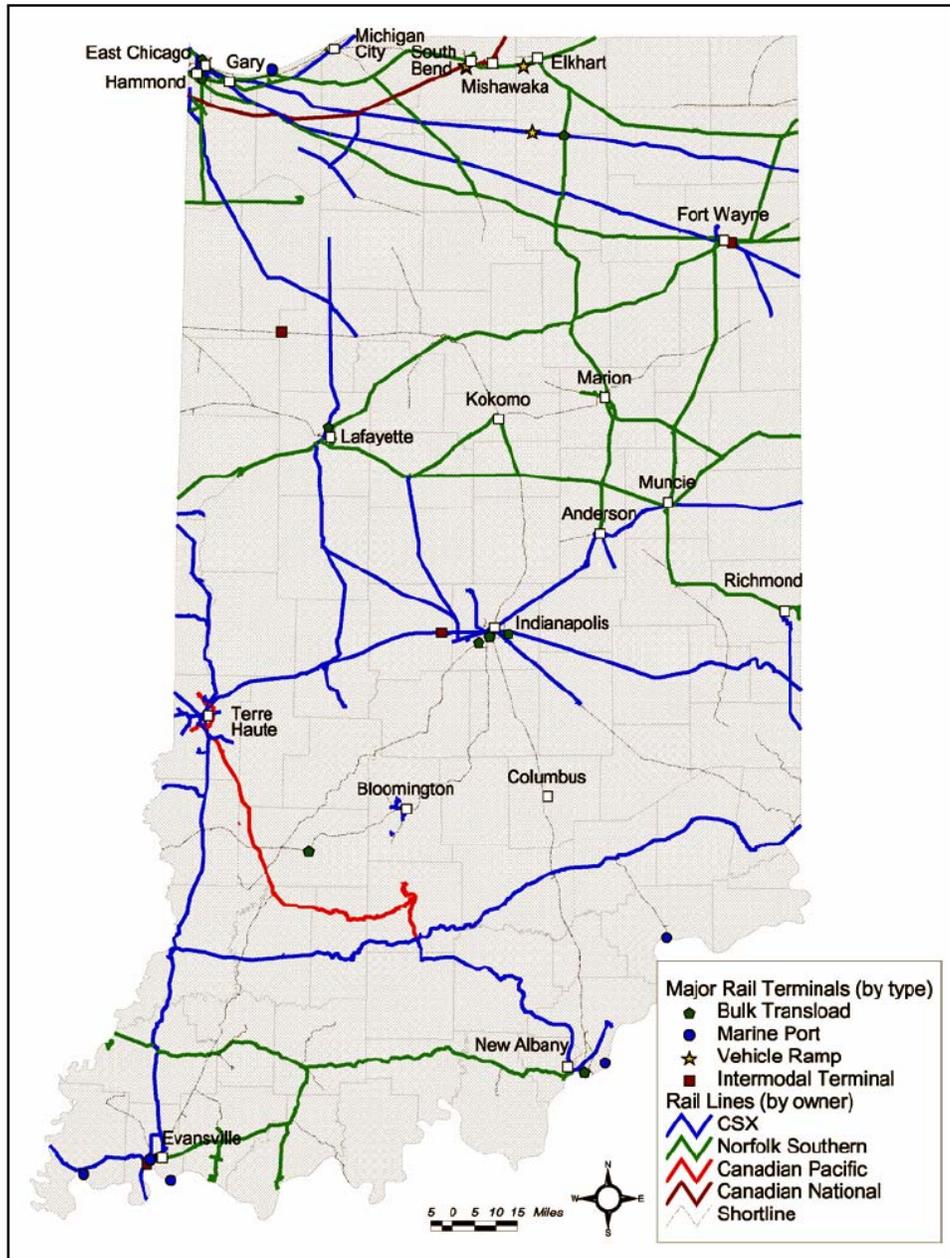


Figure 8-4 - Indiana Rail Lines and Major Intermodal Terminals

Norfolk Southern (NS) maintains 1,569 route-miles in Indiana. NS utilizes five primary routes through Indiana:

- A heavily used east-west through route between Chicago, Illinois, and Detroit, Michigan/Northern Ohio passing through Gary, South Bend and Elkhart;

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- A parallel and somewhat less-utilized route through Fort Wayne;
- An east-west route connecting St. Louis, Missouri, and Northern Ohio, serving Lafayette and Fort Wayne;
- An east-west corridor connecting St. Louis, Missouri, and Louisville, Kentucky, through New Albany; and
- A north-south route along the Indiana/Ohio border, connecting Detroit, Michigan, and Cincinnati, Ohio, via Fort Wayne, Muncie, and Richmond.

*Canadian Pacific (CP)*, via its SOO Line subsidiary, operates a single 94 route-mile corridor between Chicago, Illinois and Louisville, Kentucky. This line passes through Terre Haute and New Albany. This route shares trackage with CSXT north of Terre Haute and south of Bedford, Indiana.

*Canadian National (CN)* operates one route through northern Indiana, totaling 81 routemiles. The corridor serves as CN's main east-west connection between Chicago, Illinois and Toronto, Ontario, along the southern shore of Lake Michigan. It also provides service to South Bend.

*Regional and Shortline Railroads* provide a vital link in Indiana's rail network. Maintaining a combined total of 1,269 route-miles, short-lines serve vast areas of the State that do not have direct Class I rail service. Particularly in central and southern Indiana, short-lines such as the Louisville and Indiana Railroad, Indiana Railroad, and Indiana Southern Railroad provide north-south connections through the State's major agricultural and mining areas.

#### **Maritime**

Indiana is bordered by Lake Michigan to the northwest, and the Wabash and Ohio Rivers to the south. As such, it has significant maritime access to the nation's two major inland waterways: the Great Lakes and St. Lawrence seaways; and the Ohio/Missouri/Mississippi River watershed. These waterways provide high-capacity routes to major domestic and export markets, but both routes impose seasonal limitations. The Great Lakes waterway is open year-round, but the St. Lawrence's bi-national operating authorities close the Seaway from mid-December to mid-April for maintenance and repairs. Much of the Ohio River freezes over during the winter, which effectively closes Indiana's Ohio River ports.

In addition to a multitude of smaller private and municipal marine terminals serving the steel and agricultural industries, Indiana has three public terminals managed by Ports of Indiana. The three facilities are:

- Burns Harbor – A 500-acre terminal on Lake Michigan, serving primarily the steel and agricultural industries;
- Southwind Maritime Center (near Evansville, Indiana) – A 538-acre terminal on the Ohio River, serving the agricultural and mining industries; and
- Clark Maritime Center (near New Albany, Indiana) – A 962-acre terminal on the Ohio River, serving the agricultural and steel industries.

#### **Intermodal Facilities**

In addition to port terminals and airports, Indiana's freight system includes a number of facilities that enable the smooth transfer to goods between modes. These facilities are particularly vital to the State's rail freight network, because rail carriers typically rely on trucking for pickup and delivery, rather than providing door-to-door service. Most intermodal freight is deramped in Chicago or other out-of-state intermodal facilities. Consequently, intermodal freight is transported the final 200 miles to Indiana via roadway drayage.

Indiana's intermodal facilities generally fall into one of four categories: Trailer-on-Flatcar or Container-on-Flatcar (TOFC/COFC) intermodal terminals, bulk transload facilities, vehicle ramps, and grain elevators.

*TOFC/COFC Terminals* facilitate the transfer of time-sensitive intermodal rail cargo between highway and rail, using specialized rail equipment that accepts standardized intermodal containers or roadway trailers.

Indiana is served by four TOFC/COFC terminals, outlined in **Table 8-1**.

*Bulk-Transload Facilities* enable the intermodal transfer of low-value bulk commodities (such as petroleum, chemicals, plastics, and paper) between rail and road. These facilities are particularly crucial to heavy manufacturing industries that consume large quantities of raw materials. Indiana has 12 major bulk transload facilities. See **Table 8-2**.

<b>Facility Name</b>	<b>Location</b>	<b>Serving Railroad</b>
Avon Yard	Indianapolis	CSXT
Piqua Yard	Fort Wayne	Norfolk Southern
Evansville Yard	Evansville	CSXT
Remington Yard	Remington	Remington, Peoria, and Western

**Table 8-1 - TOFC/COFC Terminals**

<b>Facility Name</b>	<b>Location</b>	<b>Serving Railroad</b>
Jeffersonville Flexi-Flo	Jeffersonville	Louisville & Indiana, CSXT
Bloomfield Bulk Transfer	Bloomfield	Indiana Railroad
Milford Junction Bulk TransFlo	Milford	CSXT
East Chicago Bulk TransFlo	East Chicago	CSXT
MDT Transloading Services	Hammond	Indiana Harbor Belt Railroad
Matlack Bulk Intermodal	Whiting	Norfolk Southern
Indianapolis Flexi-Flo Terminal	Indianapolis	CSXT
Transfer of Indiana	Indianapolis	CSXT
Indianapolis Bulk Transfer	Indianapolis	Indiana Railroad
Indiana Reload Center	Indianapolis	Indiana Railroad
Lafayette Bulk TransFlo	Lafayette	CSXT
Evansville Bulk TransFlo	Evansville	CSXT

**Table 8-2 - Bulk Transload Facilities**

*Vehicle Ramps* specifically support the automotive industry by allowing finished vehicles to be loaded onto rail cars for efficient distribution across North America. There are four major vehicle ramps in Indiana, listed in **Table 8-3**.

<b>Facility Name</b>	<b>Location</b>	<b>Serving Railroad</b>
South Bend Vehicle Ramp	South Bend	Norfolk Southern
Oliver Yard	South Bend	Canadian National
Elkhart Ramp	Elkhart	Norfolk Southern
Nappanee Ramp	Nappanee	CSXT

**Table 8-3 - Vehicle Ramps**

*Grain Elevators* allow shipments of grain to be consolidated into unit train shipments destined for major

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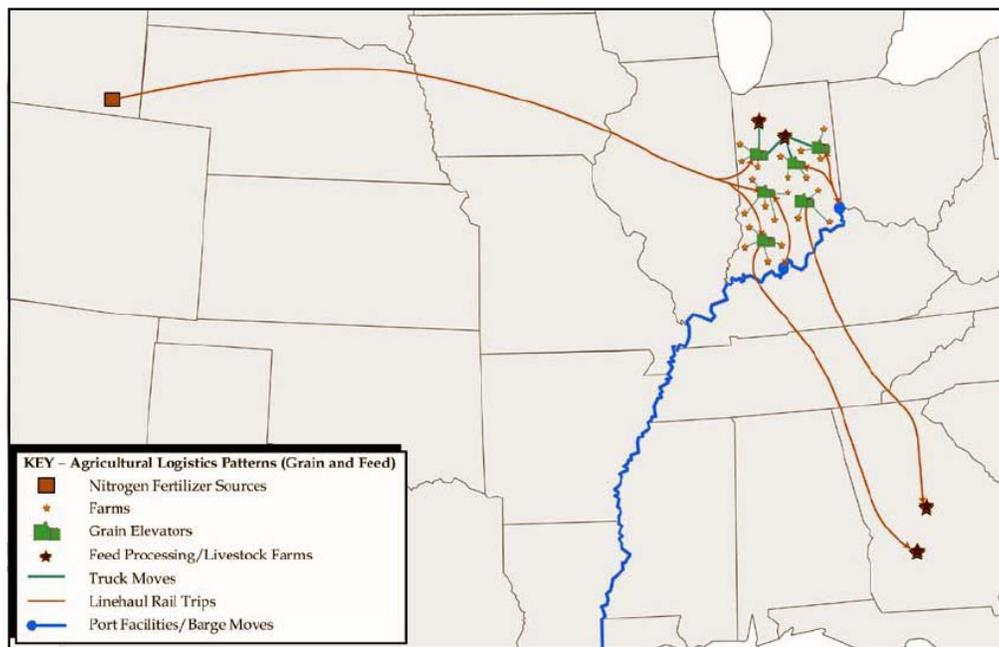
agri-business receivers across the country. These operations typically take place at numerous smaller facilities spread throughout the State. Elevators represent a critical link in the process of bringing Indiana's agricultural products to market.

### Major Industry Logistics Patterns

To understand how freight uses Indiana's transportation infrastructure, it is helpful to identify the major logistics patterns that shape the demand for goods movement in the State. As seen from the previous description of commodity flows in Indiana, the four most significant industries with respect to goods movement in Indiana are Agriculture, Mining, Manufacturing and Retail.

#### Agriculture

**Figure 8-5** illustrates one typical agricultural logistics pattern for grain and feed products in Indiana, which is representative of the State's larger agricultural industry. This illustration highlights the key trends in grain logistics patterns, and is not intended to depict a particular operation or the complete set of movements. The key aspects of agricultural logistics are outlined below.



**Figure 8-5 - A Representative Grain and Feed Logistics Pattern in Indiana**

Grain is produced on farms spread throughout central and southern Indiana and transported by truck to local grain elevators where it is consolidated with grain from neighboring farms into concentrated shipments. This local consolidation is consistent with a "hub and spoke" logistics pattern.

From the consolidation elevators, outbound grain travels to one of three major destinations:

1. Roughly 60 percent of the State's grain production is shipped to feed processing plants or livestock farms within Indiana. The relatively short distance of these moves means that most of these shipments are moved by truck.
2. Some grain travels to major centers of poultry production in the Southeast states (Georgia, Mississippi, Louisiana, and Florida). The longer distances and large volumes of these line-haul moves are a strong match for rail freight service.

3. A portion of Indiana’s grain is also transported to the State’s Ohio River and Great Lakes ports, where it is shipped by barge through the inland waterway system to serve both domestic and export markets.

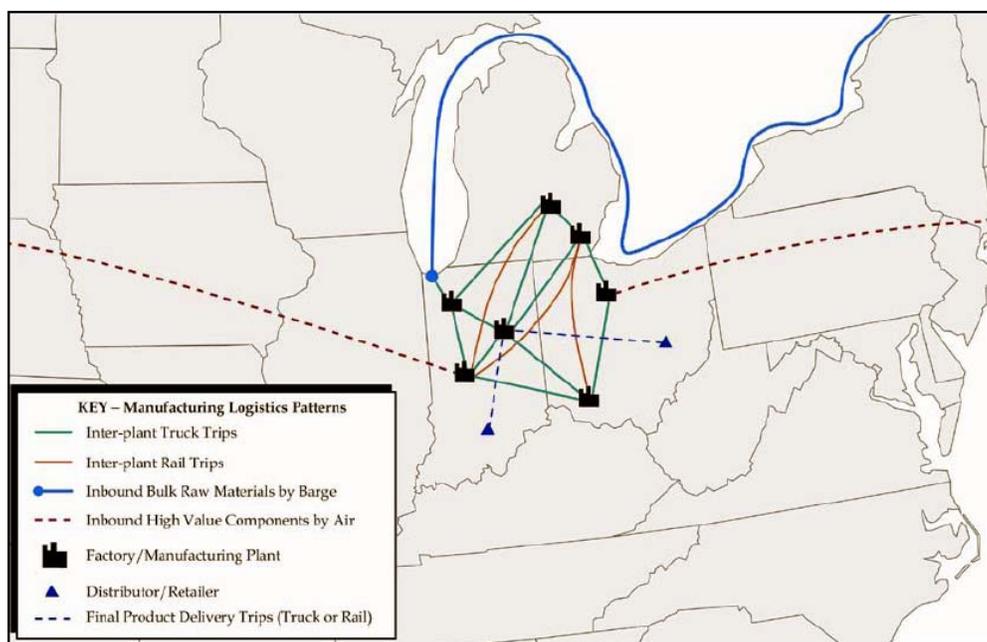
Inbound shipments of fertilizers and other agricultural input commodities generally use the same logistics chain in the reverse direction to reach local farms. Potash fertilizers are shipped to Indiana from Canada, phosphate fertilizers are sent from the Southeastern and western states, and ammonia-based fertilizers are imported through New Orleans and transported by barge up the Mississippi. Often, these inbound fertilizers can be carried in the same vehicles that carry outbound grain products. Although the volumes of outbound grain exceed the volume of inbound fertilizer, these “backhaul” opportunities provide significant cost-efficiency to the agricultural logistics chain.

In general, Indiana’s grain industry is highly rail dependent because the industry relies on low-cost bulk transportation to remain competitive in the global market. Although other modes are used in specific applications, rail freight provides a key competitive advantage that allows the agriculture industry to thrive in Indiana.

Note the recent growth of biofuels is altering this pattern in creating a larger Indiana market for agricultural products. The biofuel production capacity in Indiana for ethanol and bio-diesel, based on project announced by the State through November 2006, is 11.7 billion gallons and 100 million gallons respectively. Currently, biofuel supplies and end-products move by rail, barge, and truck (estimates provided at a recent Indiana Logistics summit are 30 percent, 50 percent, and 20 percent respectively). A study on the impacts of biofuels on transportation and logistics is currently being conducted by Purdue University through the State Planning and Research program.

**Manufacturing**

**Figure 8-6** illustrates one representative logistics pattern for manufacturing in Indiana. As with **Figure 8-5**, this illustration does not represent a particular company or manufacturing industry.



**Figure 8-6 - A Representative Manufacturing Logistics Pattern in Indiana**

The dominant characteristic of this logistics chain is the “network pattern” of point-to-point interplant moves connecting manufacturing sites responsible for different stages of the production cycle. For larger

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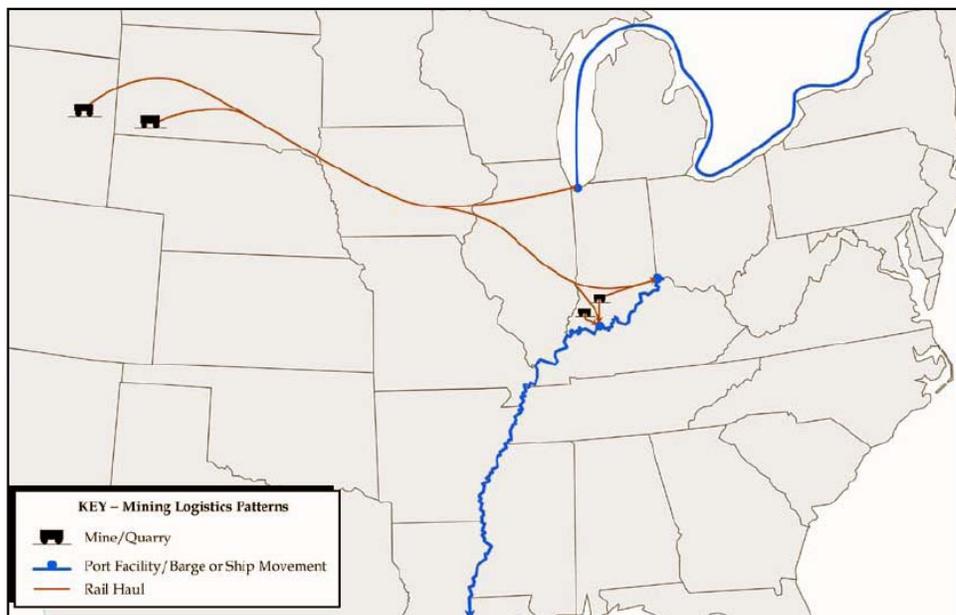
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volumes of heavier components traveling longer distances, this point-to-point connection could be accomplished by rail; however, these timesensitive moves are generally made by truck.

Low-value bulk inbound commodities (such as steel rolls) generally arrive by ship, whereas high-value inputs (such as electronic components) are generally shipped by air. Depending on the type of product being manufactured and the location of the ultimate retailer, outbound shipments of the final product may travel by rail, air or truck. While other modes are used, Indiana's manufacturing industry as a whole seems particularly dependent on truck transportation to provide cost-effective and reliable connections between time-sensitive plant operations. Indiana's abundant highway network and efficient truck service were frequently cited as key advantages by manufacturing stakeholders.

#### Mining

**Figure 8-7** shows a conceptual illustration of mining and quarrying operations in Indiana. Key aspects of the logistics pattern are outlined below.



**Figure 8-7** - A Representative Mining/Quarrying Logistics Pattern in Indiana

Mining operations in Indiana are concentrated in the Southwest corner of the State. While some coal and minerals are consumed within Indiana itself, the majority is transshipped to out-of-state markets, using Indiana's Ohio River and Great Lakes ports. Rail freight provides a critical line-haul link between mine locations and the maritime gateways for tremendous volumes of low-value mining and quarrying materials. In fact, the particularly attractive service provided by the Class I railroads from western states to Indiana have made the Indiana ports a gateway for coal from the Powder River Basin in Wyoming and Montana, as well as locally produced resources.

Mining operations in Indiana are extremely dependent on low-cost bulk transport, such as rail freight and barge, because low-value bulk products compete almost exclusively on the basis of final price to the consumer, and are moved in large quantities. Efficient bulk transportation can be the most significant determining factor in the ability to serve a given market from a particular source.

#### Retail

**Figure 8-8** provides a representative retail distribution chain. This diagram and accompanying description

covers the major concepts of retail distribution, rather than an actual retail operation. The key aspects of the retail logistics chain are outlined below.

A retail logistics chain combines the “network” patterns discussed previously for the manufacturing sector, and the “hub and spoke” pattern utilized in the agricultural sector.

- Inbound retail goods are received from suppliers at one distribution center either via truck from local suppliers, or via air or marine gateways for imported goods.
- Goods are moved by truck between a network of distribution centers and warehouses. This is the process by which inventories are balanced at each distribution center, and retail goods are eventually moved from a single supplier to multiple warehouses.
- Finally, each distribution center acts as a supply hub for several retail stores. Inventory for each store is distributed regularly by truck from the warehouses directly to each store.

The retail industry is almost exclusively dependent on trucking to provide flexible, cost-effective, and time-critical goods movement. Airfreight is significantly more important to retail goods movements than to any of the industries discussed previously, but still represents a relatively small portion of the total tonnage transported in Indiana.

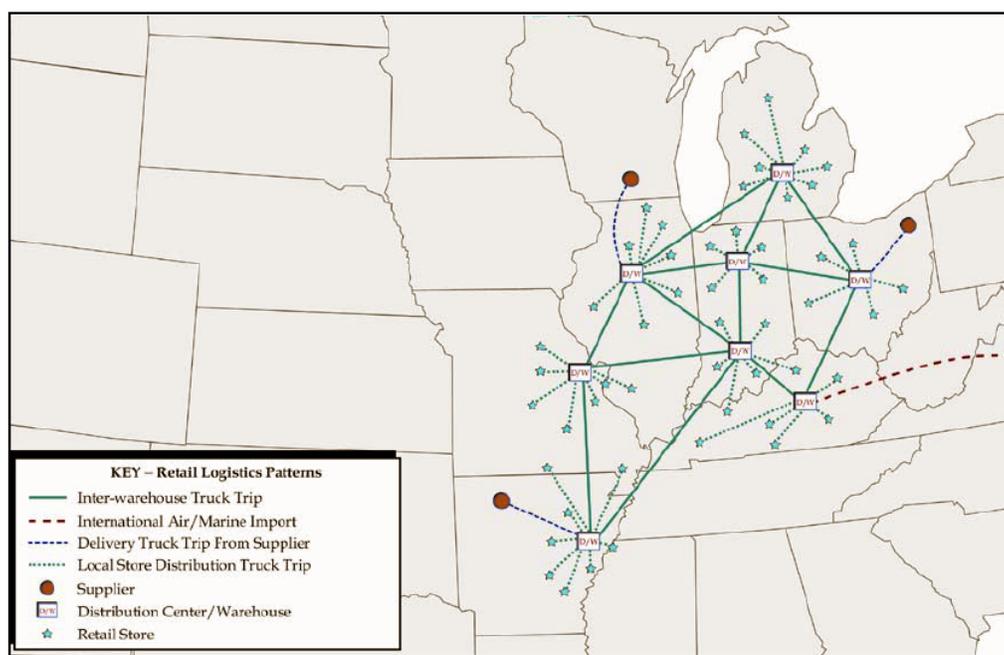


Figure 8-8 - A Representative Retail Logistics Pattern in Indiana

## Key Strengths of Indiana’s Freight Transportation Network

*Central Location* – A majority of interviewed freight stakeholders identified Indiana’s central location as a key asset to doing business in Indiana. As shown in **Figure 8-9**, a majority of the U.S. population lives within a one-day truck service radius of Indiana (each ring in the figure represents 200 miles, for a total radius of 800 miles). This makes Indiana a desirable location for concentrated warehousing and distribution facilities that serve multistate markets. Indiana also benefits from a multiplicity of the roadway network in excellent condition and offering options to choose alternative routes.

*Abundant and well-maintained interstate highway infrastructure* – Many freight stakeholders identified Indiana’s excellent interstate highway network as a key asset to goods movement in the State. In particular,

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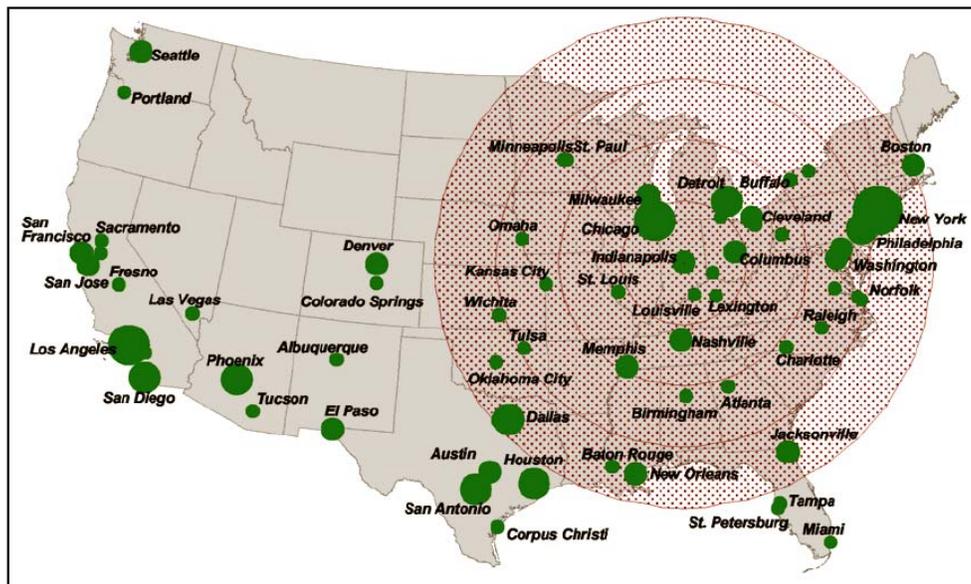
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members of the freight community felt that Indiana's interstates are maintained in a better condition than interstate highways in neighboring states, and that the interstate highway network connected most of the State's major metropolitan areas.

*Little roadway congestion* – Most freight stakeholders identified congestion and its associated costs as a significant consideration in their logistics decisions. These interviewees were quick to point out that there is less congestion on Indiana roadways than elsewhere in the country.

*Fewer toll roads than neighboring states* – Trucking carriers praised the fact that there are relatively few toll roads in Indiana's highway network, particularly in comparison to Illinois where tolled roads comprise a significant portion of the interstate network (at least around Chicago). The carriers believe that reduced operating costs allow them to provide more effective service to businesses located in Indiana.

*Quality rail service* – Shippers and receivers moving large volumes of low-value goods identified Indiana's competitive rail service by four Class I and many short-line railroads as fundamental to their operations.



<sup>1</sup> Cities with a population greater than 250,000 residents.

**Figure 8-9 - Major Metropolitan Areas within a One-Day Delivery Radius of Indiana, Scaled by Population**

While many of these shippers, such as agribusinesses and mining companies, are located in Indiana because of its natural resources rather than for transportation reasons, they cited effective rail transportation as critical to their ability to compete in the global market.

*Strong modal connections for bulk goods* – Members of the agricultural industry, in particular, cited the State's well-established network of grain elevators, port bulk transfer terminals, and other terminals that facilitate the transfer of goods between modes. For cost-sensitive bulk industries, efficient transfers between modes allow the State's shippers to utilize the most appropriate mode of transport for each link of the logistics chain.

*Taxes and economic development incentives* – One interviewee noted that his decision to locate in Indiana had been based, in part, on tax incentives.

### IDENTIFIED CHALLENGES

Goods movement in Indiana also faces several current or emerging challenges.

#### Highway

*Gap in north-south I-69 corridor and poor access to southwest Indiana* – Every stakeholder interviewed

identified the lack of an interstate highway connection between Indianapolis and Evansville as a major shortcoming of the State's freight transportation network. Members of the agricultural and mining industry felt that improved truck access to major farming and mining centers in Southwest Indiana would greatly increase the productivity of operations there. Carriers and manufactures identified the route as a major gap in the North-South NAFTA (North American Free Trade Agreement) corridor, linking production centers in the Midwest with both Canada and Mexico. Even railroad operators suggested that the roadway link would improve their market in Southwest Indiana by helping local businesses. In 2008, construction will begin on the southwest link to complete I-69 in Indiana. See Chapter 11 for detailed information on the I-69 corridor.

*Increasing congestion at bottleneck locations* – Although congestion on Indiana's roads is generally lower than in much of the rest of the country, chronic congestion problems are beginning to emerge at several critical bottleneck locations across the State. Particular locations identified in the market research include: the Borman Expressway in Northwestern Indiana, and the intersection of I-69 and I-465 in Northeastern Indianapolis.

*Limited capacity to cross Ohio River* – One interviewee noted that the Ohio River presents a major barrier to freight exchange with Kentucky and points south. In particular, the I-65 Bridge at New Albany, Indiana, is the only roadway crossing in the vicinity of the busy trade corridor with Louisville, Kentucky. This results in bridge congestion that, among other things, impedes goods movement.

*Substandard physical geometries at older interchanges and ramps* – Trucking carriers identified tight turning radii, confined lane widths, poor sightlines, and short merges at older interchanges as a safety concern for commercial vehicles. In addition to exacerbating congestion, these substandard geometries increase the danger of truck rollovers and other accidents. Currently interchange upgrades on some the older and more heavily used highways, such as I-465 in Indianapolis is underway. Also a Statewide Interchange Study is in progress which is evaluating interchange locations relative to freight deficiencies and developing improvement recommendations.

*Non-interstate roadway system* – Several stakeholders with operations outside of Indiana's major population centers observed that Indiana's state and local highways are not as well maintained as the interstate highways, and that even with these roadways there are still large gaps in the State's truck network. Since virtually all interviewed businesses identified access to high-quality transportation as a major factor in their location decision, this suggests that large portions of the State may be economically hampered because of poor truck access.

*Not enough rest areas for long-distance truckers* – A few trucking carriers with major operations throughout the Midwest commented that there are not enough rest areas on Indiana highways to serve the needs of long-distance truckers operating through the State. Particularly in light of recent changes to Federal hours-of-service regulations, INDOT should consider evaluating the location of its current rest areas, and augment or relocate these facilities as needed to meet current use patterns.

*Multi-year tractor plates* – One interviewee commented that the need for multi-year tractor permits and certificates on tractors operating in Indiana limited his ability to position equipment efficiently. This may be of particular concern to operators that conduct limited business in Indiana, and may be more hesitant to commit to a three-year certificate. To the extent that this policy may reduce the number of carrier options for Indiana businesses, it may negatively impact statewide goods movement.

*High cost of truck litigation and damages* – One stakeholder observed that recent dramatic escalation in the cost of litigation and damages resulting from accidents involving commercial vehicles have increased the cost of doing business in general (not just in Indiana). While this appears to be a national trend, it suggests that there are significant secondary economic benefits to programs that improve highway safety or reduce dangerous roadway conditions.

## **Rail**

*Increasing size of bulk rail equipment* – Currently, the most significant trend in railroading is a steady increase in the weight and dimensions of bulk rail cars, and the increasing length of unit trains carrying grain and minerals. This trend is driven by clear economies of scale for the major Class I railroads, which can haul the same traffic with fewer trains and crew.

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It is, however, more difficult for short-line railroads and local terminal operators to support rapid upgrades to their facilities to accommodate these large trains. With their more limited markets and financial resources, many short-line railroads cannot afford to upgrade their lines to the new 286 thousand pound-per-axle track standard required by modern bulk cars. Similarly, smaller terminal and elevator operators often do not have the resources to lengthen sidings to accommodate more cars. Failure to upgrade, however, prevents these lines from offering competitive service, and undermines their market.

Ultimately, many of the State’s short-lines and grain elevators could face closure, resulting in a significant increase in the flow of trucks carrying farm products longer distances to a smaller pool of larger rail terminals.

*Shortage of covered hopper cars* – The agricultural industry is experiencing a national shortage of covered hopper cars, which are essential to the movement of grain and other bulk farm products. Larger producers have purchased their own cars, but smaller producers cannot justify the cost. These companies are still wrestling with the full delays and uncertainty resulting from the hopper car shortage.

**Marine**

*Winter closure of Indiana ports* – Barge and vessel traffic in Indiana generally serves a specialized niche market that has adapted to the unique strengths and limitations inherent in the inland waterway network. One such limitation is the fact that the St. Lawrence Seaway is closed for maintenance in the winter months, and that the Ohio River freezes and becomes impassable.

**Air**

No challenges to the region’s airfreight system were identified during the course of the interviews. While the focus of the interview was on surface transportation issues, Indiana freight users seem generally happy with the quality of the State’s airfreight service.

**Current Activities**

**Upper Midwest Freight Coalition**

The Upper Midwest Freight Corridor Study (UMFCS) concluded on October 31, 2006, with the submission of the project’s final report. While all future work will be done as the Mississippi Valley Freight Coalition (see below), the UMFCS remains a valuable source of regional data and analysis on the needs, usage, administration, capacity, and future of the Upper Midwest transportation system’s ability to meet freight demand.

From the Executive Summary of the UMFCS, here are some of the activities and priorities identified:

<b>Short term priorities with immediate payoff:</b>
Collect improved regional data and continue to enhance Midwest FreightView database <a href="http://www.midwestfreight.utoledo.edu/">http://www.midwestfreight.utoledo.edu/</a>
Document regional freight funding needs and consequences
Create an ongoing regional organization
Improve political and public understanding of freight
Support multi-modal solutions for bottlenecks
Address regulatory bottlenecks at border crossings
Define a freight focal point in each state transportation agency
<b>Longer term priorities:</b>
Support river and lake lock improvements
Define a regional freight network
Define the role and structures appropriate for public/private partnerships
Develop model freight-related planning approaches
Implement regional freeway management technologies; multistate traffic operations program (MSTOP)
Consider modifications to Jones Act of 1920 – particularly provisions related to vessel production

**Table 8-4**

### Mississippi Valley Freight Coalition

The Mississippi Valley Freight Coalition has built upon the work of the Upper Midwest Freight Corridor Study to establish this organization of states that share key interstate corridors, rail infrastructure, and inland and Great Lakes waterways. Indiana has joined with ten other states in the midwest (Illinois, Indiana, Iowa, Kansas, Kentucky, Michigan, Minnesota, Missouri, Ohio, and Wisconsin) to form a regional organization to cooperate in the planning, operation, preservation, and improvement of transportation infrastructure in the Mississippi Valley region. All major U.S. and Canadian railroads converge in Chicago. Major east-west interstates (I-80, I-90 and I-94) and north-south (I-35, I-65, I-69, I-71 and I-75) link the states to each other and the nation as a whole. Ports on the Great Lakes and the Illinois, Ohio, Mississippi, and Missouri rivers provide maritime connections to national and international markets.



Figure 8-10 – Mississippi Valley Freight Coalition

The signing of a Memorandum of Understanding by these states' Departments of Transportation (including INDOT) indicates their willingness to meet freight demand through regional cooperative efforts. The Mississippi Valley Freight Coalition is currently involved in the formation of Executive and Technical Committees, the surveying of transportation Customers in the region (to form a Customer Committee), and the development of a Charter and Assessment of Financial Needs.

**Chapter 8 Freight Transportation**  
**INDOT 2030 Long Range Transportation Plan**

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