

Freight

The economy of the Louisville (KY-IN) Metropolitan Planning Area (MPA), similar to that of the United States as a whole, is largely dependent on the efficient, reliable, and safe movement of freight. Goods move from the supplier to the consumer through a complex network of transportation service providers and infrastructure. Shipments may consist of small packages or bulk items, finished products or raw materials, but all will require some form of transportation to move them from origin to destination. Some shipments will begin and end within the MPA, while others will either originate or terminate there, and the remainder will simply pass through it. *Horizon 2030* includes strategies to both maintain and enhance the transportation system used for freight movement, an increasingly essential activity in a strong and competitive global economy.

Freight and passengers use much of the same transportation network. Often, both freight and passenger modes will experience the same system congestion, bottlenecks, access, and safety problems. In such cases, one remedy may well address the needs of both types of system users. For example, most maintenance, operations, roadway capacity, and safety projects that will directly benefit the traveling public will benefit freight users as well. *Horizon 2030* contains many projects that will preserve and improve the transportation system for both people and freight.

Several planning tools have been developed to aid in supporting safe and efficient freight movement in the Louisville (KY-IN) MPA. Among these are the designation of freight as a Regional Priority in *Horizon 2030*, the definition of the KIPDA Freight Corridor System, and the ongoing development of the KIPDA Freight Resource Network.

Conditions Favorable to Goods Movement

Location has played a major role in the development of the Louisville (KY-IN) MPA into a major freight movement and logistics hub. The area is centrally located within the United States. Over two-thirds of the nation's population is within a day's drive of Louisville, placing the area in proximity to major manufacturing and consumer markets. The location of the original core settlement along the navigable Ohio River, particularly near the Falls of the Ohio, encouraged a significant waterborne commerce and often necessitated the transshipment of goods. Three major interstate highway routes intersect in Louisville: I-64, I-65, and I-71, providing direct highway access to major cities in all directions.

All major shipping modes are represented in the Louisville (KY-IN) MPA. While the traveling public is probably most familiar with the trucks they see on the roadway, freight is also transported here by rail, air, water, pipeline, and a combination of modes, known as intermodal. It is this wide range of available transportation modes that has made Louisville and the surrounding area so attractive to major manufacturers, warehousing and distribution operations, and third party logistics providers. Such modal diversity also requires an equally diverse set of transportation strategies to ensure that goods continue to flow reliably, safely, and smoothly.

Freight Modes

Service time, delivery area, transport costs, and characteristics of the commodities, are some of the considerations that determine the mode, or combination of modes, used to ship goods. In general, the highest value, lightweight, most time-sensitive cargo, such as finished, perishable consumer products and overnight mail parcels, will be shipped by air, while water and pipeline cargoes tend to be lower value, heavier, less time sensitive raw materials.

Freight Modes: Forecasts

Freight volumes and cargo values are on the rise, while modal shares are shifting. This is the future of freight in the United States as forecast by the Federal Highway Administration (FHWA) Freight Analysis Framework, or FAF. FAF version 2.2 contains a 2002 base estimate, as well as a 2035 forecast of freight volumes and values by mode.

FREIGHT SHIPMENTS BY TONS AND VALUE UNITED STATES

MODE	TONS (millions)		VALUE (billions \$)	
	2002	2035	2002	2035
Total	19,328	37,211	13,228	41,867
Domestic				
Air, Air & Truck	3	10	162	721
Truck	11,336	22,230	8,447	21,654
Rail	1,769	3,292	288	483
Water	595	874	76	103
Intermodal*	196	334	983	4,315
Pipeline, Other**	3,772	6,926	1,127	2,315
Total, Domestic	17,670	33,667	11,083	29,590
International***				
Air, Air & Truck	8	51	609	5,203
Truck	203	583	409	2,113
Rail	110	233	94	219
Water	106	168	26	49
Intermodal*	1,096	2,264	984	4,651
Pipeline, Other**	134	245	23	42
Total, International	1,658	3,544	2,145	12,277

Note: Modal numbers may not add to totals due to rounding.

Source: USDOT, FHWA, Office of Freight Mgmt and Ops, FAF, v2.2, 2007

* Intermodal includes USPS, courier shipments, and all intermodal combinations, except air and truck. Intermodal also includes oceangoing exports and imports that move between ports and interior domestic locations by modes other than water.

** Pipeline and unknown shipments are combined because data on region-to-region flows by pipeline are statistically uncertain.

*** Data do not include imports and exports that pass through the United States from a foreign origin to a foreign destination by any mode.

The volume of goods moved in the United States is increasing, placing added stress on the nation's transportation network. According to the most recent FAF-based forecasts, the total cargo volume moved is expected to increase by almost 18 million tons, almost doubling, between 2002 and 2035. Volumes for individual freight modes may increase anywhere from 47% for the domestic water mode to 529% for international air and air/truck over the same period.

As the nation's economy continues to evolve from a manufacturing base to services, more value-added products will move through the system to the marketplace, driving up cargo values and fueling a shift to faster, more reliable transportation modes. By 2035, overall shipment values may grow to well over 200% above 2002 levels. Triple digit percentage growth in cargo value is expected in most modal sectors, both domestic and international. Some of the greatest percentage increases are expected in the air, air/truck, truck, and intermodal areas as more high value, time-sensitive goods must move through the system.

Modal shares of shipments are also shifting in response to the demand for faster, more flexible modes. On both a tonnage and value basis, most of the non-pipeline freight shipped in the United States travels by truck. In 2002, 60% of the total freight volume moved by truck, followed by 10% on rail, 7% by intermodal moves, 4% by water, and less than 1% by air. The 2035 modal volume scenario looks much the same. The share of cargo moved by truck is expected to increase slightly, while air's overall share, still below 1%, will double. In terms of shipment value, in 2002, after truck, intermodal was a significant share of the modal scene at 15%, followed by air and air/truck at 6%, rail at 3%, and water at 0.5%. By 2035, 14% of the nation's total cargo by value will be shipped by air. Transportation demand pressures will continue to increase across all modes, but may be felt more acutely in the highway, intermodal, and air modes through 2035.

Freight Modes: Rail

Several rail companies serve the Louisville (KY-IN) Metropolitan Planning Area, either operating on their own rail lines or through trackage rights on the lines of others in the MPA. Three Class I rail companies provide service to both the Indiana and Kentucky portions of the Louisville (KY-IN) MPA through their national networks: CSX Transportation, Norfolk Southern Corporation, and the Canadian Pacific Railway. One Class II carrier, the Paducah and Louisville, provides regional service between Louisville and points in western Kentucky. The remaining companies are Class III short line railroads, each providing mostly local, switching, and terminal services within the MPA. These carriers include the Indiana Rail Road, the Louisville and Indiana Railroad Company, MG Rail, Inc., the Southern Indiana Railway, Inc., and the RJ Corman Railroad Company.

Freight Modes: Air

Three airports serve the Louisville (KY-IN) MPA: Louisville International and Bowman Field in Kentucky and Clark Regional in Indiana. Louisville International is the largest of the three and is classified by the Federal Aviation Administration (FAA) as a primary airport. Bowman Field and Clark Regional are smaller, general aviation airports that the FAA has designated as reliever airports for Louisville International.

Each of the three airports handles freight, although in varying amounts. In terms of air cargo volume, Louisville International is the primary facility. In fact, according to the FAA, Louisville International currently ranks third in the United States among airports in terms of the landed weight of all-cargo operations, only surpassed by Ted Stevens Anchorage International and Memphis International. The United Parcel Service (UPS) Worldport and heavy air freight hub operations at Louisville International

generate the majority of shipment volumes, while military cargo accounts for a smaller share. Bowman Field and Clark Regional are regularly used for smaller amounts of just-in-time and emergency shipments. A runway extension is planned for Clark Regional in order to position the facility to handle larger aircraft and more effectively serve as a reliever facility for Louisville International Airport.

Freight Modes: Water

The Ohio River is part of the United States' inland waterway system, flowing 981 miles from the confluence of the Allegheny and Monongahela rivers in Pittsburgh, Pennsylvania to the Mississippi River at Cairo, Illinois. The Ohio is a navigable river for its entire length due to a system of locks and dams. The McAlpine Locks and Dam is located on the Ohio River in Louisville at mile 606.8. A lock replacement project, completed in 2009, replaced two older locks (600 and 300 feet long, respectively) with a new 1,200 foot lock, significantly improving capacity and lock-through times. Shallow draft barge tows are the primary traffic on the Ohio.

The Louisville (KY-IN) MPA is home to two public riverports on the Ohio River, as well as several private docks. Jefferson Riverport International encompasses over 1,800 acres and is located on the Kentucky side of the Ohio. Major commodities that pass through the Jefferson Riverport include coal, coke, slag, minerals, sand, gravel, and steel. The Port of Indiana—Jeffersonville, on the other side of the Ohio River, covers almost 1,000 acres. Commodities handled by this facility include corn, soybeans, fertilizer, plastics, paper, iron, steel, and grain. In addition to serving as cargo transfer facilities, both riverports are designated as Foreign Trade Zones, and are home to numerous manufacturing, warehousing and distribution, and industrial tenants.

Freight Modes: Pipeline

In the Louisville (KY-IN) MPA, most pipelines carry liquid petroleum products and natural gas. According to the USDOT Office of Pipeline Safety, there are 177 miles of interstate natural gas, 126 miles of intrastate natural gas, and 130 miles of interstate liquid petroleum pipelines in the MPA. Of the five counties, Jefferson has the highest combined mileage of pipelines, with 256. Bullitt and Oldham each have 68 miles, while Clark has 30 and Floyd has 10.

Freight Modes: Highway/Truck

Trucks are the most visible of all the freight modes in the Louisville (KY-IN) MPA because they use the same highway network as transit and motorists. The roadway network is quite extensive in the Louisville (KY-IN) MPA, providing good overall connectivity for trips of varying lengths. According to 2002 Highway Performance Monitoring System (HPMS) data, there were 190 centerline miles of interstates and expressways in the five county area available for interregional and intraregional travel and shipping. Arterials represented 621 centerline miles, while collectors and local roadways represented 5,084 centerline miles, serving to connect destinations within the MPA, as well as to the interstate system.

Much of the time, the extensive highway network allows the almost 100 motor carriers (source: INDOT) serving the Louisville area to offer efficient and reliable service. As the number of trucks on the highways increases, however, they will encounter more frequent, higher levels of congestion and bottlenecks. The FHWA Freight Analysis Framework version 2.2 also contains baseline truck volumes and forecasts for 2002 and 2035 for the five county area. Truck volumes are expected to increase over 223% from 2002 to 2035, as compared to an expected 180% increase for total traffic volume. The truck mode share of the vehicle stream is also expected to increase from about 10% to 12% during this period.

Freight Modes: Intermodal

Intermodal shipments move by a combination of two or more transportation modes. Unless a business is located along a dedicated rail siding, positioned within an airport, or has its own port, river dock, or pipeline connection, a transfer to another shipment mode will be necessary. Most often, the other mode used is truck. Each of the non-highway modes has several public and private transshipment points, or intermodal connection points, for transfer to another mode.

A few of the larger intermodal facilities in the Louisville (KY-IN) MPA include the following [modes available for transfer]:

- Campground Road and Bells Lane Petroleum and Chemical facilities [pipeline/barge/truck]
- Louisville International Airport [air/truck]
- Norfolk Southern Intermodal facility [rail/truck]
- Port of Indiana—Jeffersonville and Jefferson Riverport International [barge/rail/truck]

Planning Tools: Freight Regional Priority

In August 2004, the KIPDA Transportation Policy Committee designated freight as one of six Regional Priorities to be used in the development of the metropolitan transportation plan. Strategies to encourage efficient freight movements not only address congestion, safety, and access problems, but support economic development as well. In order to qualify as a Regional Priority for freight, a project must improve mobility within the designated KIPDA Freight Corridor System. The stated project purpose and need should indicate the intent to improve freight movement in the designated corridors.

Planning Tools: KIPDA Freight Corridor System

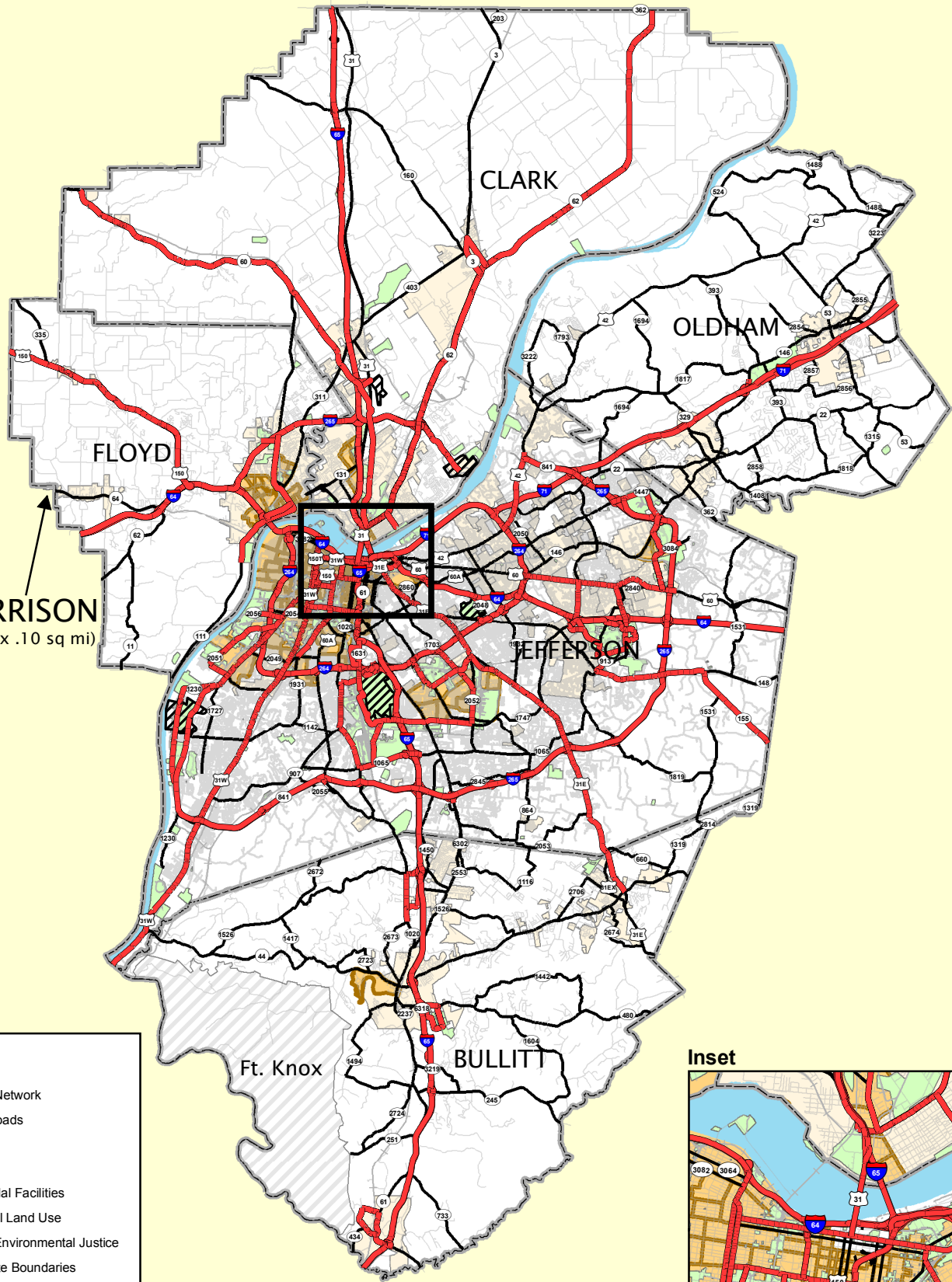
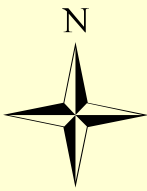
The KIPDA Freight Corridor System was created as a tool to be used in the formulation of plans and strategies to address goods movement in the Louisville (KY-IN) MPA. The system identifies portions of the roadway network with significant truck volumes, as well as connections to intermodal facilities and major industrial areas.

The FHWA Freight Analysis Framework highway network forms the backbone of the Freight Corridor System. The FAF includes roadways in the National Highway System (NHS), as well as established NHS Intermodal Connectors. The FAF data also includes base (2002) and forecast (2035) total and truck volumes, which can be used to quantify current and future year freight flows relative to the system and individual facilities.

Connectivity throughout the existing and planned system is integral to the success of safe and efficient freight movement. The Freight Corridor System provides a reference for the Freight Regional Priority, as well as providing an inventory of facilities, aiding in the determination of data collection needs, evaluating system performance, and identifying areas for system improvements. The system is designed to be flexible and will be enhanced and updated as necessary.

Planning Tools: Freight Resource Network

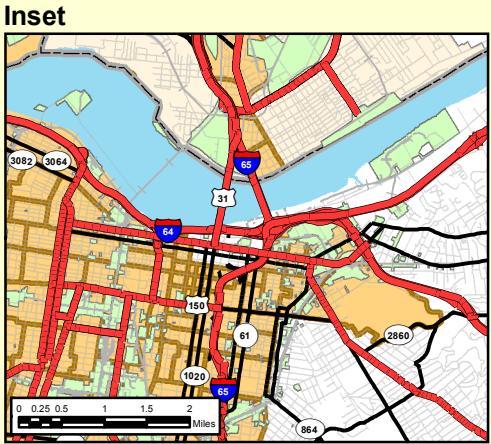
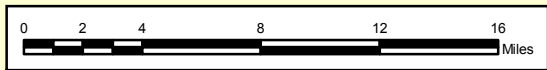
One tool that continues to be refined and is intended to aid with freight sector outreach and inclusion is the KIPDA Freight Resource Network. The Freight Resource Network consists of a targeted database of public and private sector stakeholder contacts from across the region. These contacts serve as an information resource, providing a conduit for the exchange of information to and from transportation planning efforts.



HARRISON
(approx .10 sq mi)

Legend

- Freight Network
- Major Roads
- Streets
- Railroad
- Intermodal Facilities
- Industrial Land Use
- Title VI/Environmental Justice
- Corporate Boundaries
- County Boundaries



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LOUISVILLE (KY-IN) METROPOLITAN PLANNING AREA KIPDA FREIGHT CORRIDOR SYSTEM

