

ISSUE BRIEF



KENTUCKY TRANSIT AND RAIL

2011 Kentucky Grade: C-

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Kentucky's transit and rail systems move 100 million of tons of freight and move people 100 million miles annually. As population increases and highways become more congested, transit and rail will become important alternatives for commuters and businesses. Having a long-term vision for the future is important to the growth of Kentucky.

CURRENT CONDITIONS

For the purposes of this report card, transit facilities include both public and private heavy rail, light/commuter rail, trolleys, city buses, and rural on-demand bus service. Other facilities considered part of the transit system, for which statewide data is not available, include things such as bike lanes, bus stops, airport shuttles, etc. In this report, the "golden triangle" refers to the group of large urban areas in Kentucky, Louisville, Lexington and Northern Kentucky.

Kentucky has an extensive transit history, especially with barges, ports, heavy rail, ferries and interstate bus lines. In fact, Louisville was created by a portage at the falls of the Ohio River. Meanwhile, Fulton was a major barge to east-west rail transfer on the Mississippi River prior to the interstate highway system.

Heavy rail, commuter rail, interstate passenger bus lines and ferries peaked in Kentucky prior to the interstate highway system. Coal production and the trains needed to transport coal began to decline during this time as well.

In 2010, the majority of trips – both passenger and freight – in Kentucky were made by car or truck. Highways are the main transportation resource in Kentucky, while commercial/industrial railroad, commercial bus lines, recreational railroads, steamboats, ferries and river ports are all secondary transportation resources. Major manufacturers are currently the main industry that requires rail access in addition to highway access.

Rural public transportation in Kentucky is generally a demand-responsive, door-to-door service. Public transportation for older adults and people with disabilities is also a separate, on-demand door-to-door service. In 2010, 24 public and private agencies provided service to approximately 1.7 million unlinked passengers, and operated 1,294 vehicles that traveled 30.4 million miles. ADA (Americans with Disabilities Act) standards are met by 820 million of those vehicles. (An unlinked trip is a single component of a trip, such as a segment of a bus trip. If one transfer is required as part of a trip, it is counted as two unlinked trips.)

The three largest providers of public transportation in Kentucky are the Transit Authority of River City (TARC) in Louisville, the Transit Authority of Northern Kentucky (TANK) and the Transit Authority of Lexington (LEXTRAN). Bus transportation is the only mode currently offered by each. However, TARC and TANK have preliminary engineering efforts under way for light rail in Louisville and Northern Kentucky, which have not resulted in construction.

Statistics provided by the Federal Transit Administration's (FTA) National Transit Database (NTD) show that TARC, the largest provider of public transportation in the state, provided more than 15.7 million unlinked trips in Louisville in 2009. Meanwhile, TANK and LEXTRAN provided 3.7 million and more than 5.5 million unlinked trips, respectively. This brings the total for the golden triangle areas to nearly 25 million unlinked passenger trips annually. For non-urbanized areas, private and public service providers provided nearly 3 million unlinked passenger trips annually.

Transit, Rail and Port Facilities

Each of Kentucky's 120 counties has some form of transit. Most of these are limited to on-demand services, generally reserved for elderly or disabled riders.

As of 2002, there were approximately 2,800 miles of railways in Kentucky, with nearly 65 percent operated by CSX Transportation. Hazardous, chemical and equipment freight are major categories of rail traffic.

As of 2009, Amtrak had four stations in Kentucky – Ashland, Fulton, Maysville and South Portsmouth. Total ridership was 8,996. Funding from the American Recovery and Reinvestment Act for Amtrak in Kentucky totaled \$226,000 and was mostly used for ADA compliance projects in station houses.

The Kentucky freight system is comprised of eight railroads. Rail shipments account for more than 20 percent of Kentucky freight shipments by weight and approximately 4 percent by value. Major rail-highway intermodal facilities are located in Georgetown, Shelbyville and Louisville. In 2008, more than 100 million tons of freight were moved by rail in the state. Coal is by far the largest product moved on rail.

Two of the benefits to rail usage are fuel efficiency and reducing highway gridlock. One train can carry the load of 280 or more trucks. In 2008, 296.4 million tons of freight originated, terminated, or passed through Kentucky by rail. It would have taken approximately 15 million trucks to handle this freight.

Huntington-Tri-State, which includes Ashland, is one of the largest U.S. inland ports and handled 77.6 million tons of freight in 2003. The major destinations for this port include Cincinnati, Ohio, with 11.8 million tons; Louisville, Kentucky, with 8.5 million tons; and Elvis Stahr Harbour in Hickman, Kentucky, with 0.8 million tons.

Kentucky's waterborne shipments account for 9 percent of shipments by weight and 2 percent of shipments by value. In Kentucky, the overall top freight commodities by weight are coal and machinery, respectively.

Maintenance

The transit agencies in Louisville, Lexington and Northern Kentucky have much larger fleets than transit agencies in rural locations and generally have their own garage and fueling stations, although the number and size of these facilities are not published.

Of the state's 9,850 buses, 7,815 are currently drawing depreciation and are therefore still within their useful life, which is five years. Twenty percent, or 2,035 buses, are not drawing depreciation and have exceeded their useful life; however, this does not mean that they are in any way unserviceable, but may indicate they have been well maintained. The average age of the vehicle fleet is 2001 for urban and 2006 for rural systems. Vehicle replacement costs for 2010 are estimated to be more than \$41 million. State agencies have not estimated costs or volumes for transit other than buses since 2001.

The Kentucky school bus fleet has grown at a rate of more than 1 percent per year for the last 20 years. For 2010, this would amount to 100 buses at an average cost of \$85,391 each. This figure is accounted for in the \$41 million vehicle replacement costs.

Louisville Wheels has its own maintenance facility that serves five counties. Rural Transit Enterprises serves 13 counties and has its own maintenance garage, located in Mt. Vernon in Rockcastle County. Bowling Green Southern Kentucky Community Action has recently purchased a maintenance facility. Paducah Transit Authority also performs its own maintenance and recycles oil. In the city of Manchester in Clay County, Daniel Boone Development Council provides maintenance. Maysville Transit, Glasgow, Northeast Community Agency and LKLP Community Action of Hazard all perform their own maintenance as well.

Besides the above maintenance facilities, several of the rural transit agencies have built or purchased new transit facilities/transfer stations/parking garages across the state.

Needs Assessment

While a turnpike authority exists in Kentucky, a modern transit agency does not. Needs assessment is lacking and should be completed to appropriately address long-term transit planning. State agencies have not estimated costs or volumes for transit other than vehicles since 2001.

A recent report for Lexington Fayette Urban County Government (LFUCG) recommended further developing "park and ride" and development of light rail/monorail. The report also recommended expanding public transportation services to regional communities, such as HOV lanes and bike trails, both of which are part of local transit system.

The Paducah Transit System (PATS) has conducted a recent study for approximately 200 organizations in the city of Paducah and McCracken County. In 2009, phase one of a regional Mobility Service for All Americans (MSAA) Travel Management Coordination Center (TMCC) was completed. This project is expected to be completed in 2013. Phase one has implemented many new technologies to the bus system: intelligent transit system technologies, including automatic vehicle location, on-board cameras and digital video recording, upgraded telephone

systems, an agency server, interactive voice response, website, Google transit trip planner, and a connection to KY511.

New technologies will assist in current bus systems and will be applied to light rail cars when they are added in Kentucky. The current heavy rail system is privately owned and would not be coordinated with these technologies without new regulations.

The Georgia Department of Transportation (GDOT), Tennessee Department of Transportation and Kentucky Office of Transportation Delivery have entered into a MOU to participate and contribute to a study of the High Speed Rail Corridor between Louisville, Nashville and Atlanta.

This rail study will focus on a new coordinated high-speed rail corridor extending from Chicago, south through Indiana, Kentucky, Tennessee, Georgia and on to Florida. The study area is a section of the corridor starting in Louisville, moving south through Nashville, and finally south to Atlanta. The potential rail corridors previously studied in the CFS did not include this corridor. However, the Kentucky Office of Transportation Delivery, Tennessee, and Georgia Departments of Transportation, with technical guidance from FRA, intend to analyze this route segment in a new study as an extension and connection of the Midwest Network (Chicago to Louisville) and a segment of the Southeastern Corridor studied in the CFS by employing funding contained in the consolidated FY2004 appropriations, Public Law No. 108-199.

This new rail study will assess the viability of a public-private partnership for rail development in this corridor extension, where government agencies invest in capital construction and maintenance of HSR infrastructure and a private, non-subsidized operator provides for train operations.

The Kentucky Transportation Cabinet also is active with other transit projects, but such information is not readily available.

Trip Generation and Capacity

According to the 2000 Census, more than 80 percent of commuters travel alone to work. The remaining commuters either carpool, use public transportation, walk, work from home or use other methods to travel to work.

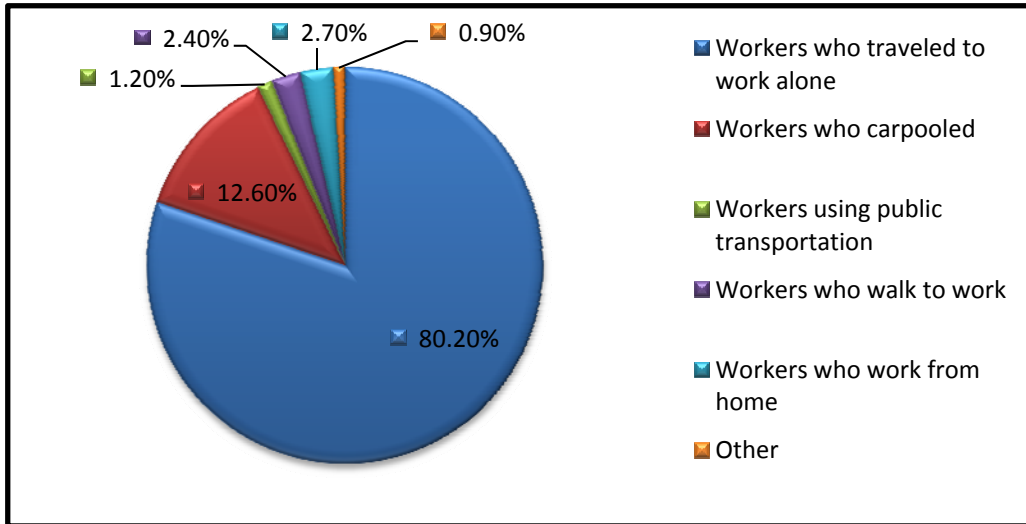


Figure 1 – Mode of Transit for Workers 16 and Over in Kentucky

The 2000 Census data shows the mean travel time to work is 23.5 minutes. However, workers in rural areas and suburban commuters along congested routes in the Golden Triangle may easily have travel times greater than 30 minutes each way.

The Kentucky Department of Education manages the state school bus program, which has experienced a 0.5 percent increase in bus ridership, while also experiencing a 2 percent decline in the student population from 2003 to 2009.

Rail capacity is not available to the public, as the railroad companies are private businesses. Port capacity was not readily available for this report.

Organization

The Kentucky Transportation Cabinet Office of Transportation Delivery has a division of Public Transit & Human Service Transportation Delivery. The Golden Triangle service providers provide detailed transit planning for their location. Locally, the regional metropolitan planning offices (MPO) are known in Kentucky as area development districts (ADD) and function as the transit planning and management bodies for basic transit services. Most of these agencies are limited in scope and funding to basic transit services (i.e. buses) at this time.

Financing

Because rail is currently a private business, information regarding rail is limited. The Federal Transit Administration (FTA) manages public systems and typically allocates funding for capital purchases, such as the purchase of new buses and the construction of maintenance facilities. For the program, operating financing is 50% federal and 50% local funds, and capital financing is 80% federal, with 10% local and 10% state.

In Kentucky, 58 percent, 76 percent and 65 percent of LEXTRAN, TANK and TARC's operating budgets, respectively, is provided by local sources, such as occupational, property or

general fund money. Ninety percent of funding for urban capital projects comes from the federal budget.

The largest funding source for capital and operating expenses for most rural providers in Kentucky is FTA. The exception to this is the Central Kentucky Community Council – 60 percent of their operating revenue is provided by local sources. Other similarly populated states, such as Tennessee, Indiana and Arkansas, also receive a high percentage of federal funding for capital projects. In 2010, the operating budgets of rural providers totaled \$51.2M and had capital expenditures of \$26.0 M.

Table 1 – Estimated Share of Statewide Transit Costs

Description	2004	2010
Replacement Vehicles	\$5.4 million	\$6.3 million
Expansion Vehicles	\$2.2 Million	\$2.6 million
Capital Cost Contracting	\$0.6 million	\$0.7 million
Capital Cost Maintenance	\$1.4 million	\$1.6 million
Northern KY Light Rail	-	\$23.0 million
Louisville Light Rail	-	\$48.0 million
Other	\$2.0 million	\$2.3 million
Total	\$11.6 million	\$84.5 million

Capital Projects

No public money has been spent for either a recent commuter rail study or construction. Because buses use on-system existing routes (roads), capital projects for bus routes are listed in Transportation Report Card section.

The Kentucky Public Transit Association in coordination with the Kentucky Transportation Cabinet/Office of Transportation Delivery has been progressive with statewide vehicle/fleet procurements. In several cases, new vehicles have been placed in transit operations months ahead of schedule.

During SFY09 and SFY10, the Transportation Cabinet/Office of Transportation Delivery processed \$4.5 million State-Of-Good-Repair grants for the replacement of old vehicles, radios and transit computer systems.

New State-of-Good-Repair grants (over \$5 million in federal funds) has been announced for SFY11 for transit renovations for Middle Kentucky River in Jackson, Federated Transportation Services in Lexington, Southern Kentucky Community Action in Bowling Green, and Transit Authority of Central Kentucky in Lebanon.

In addition, pending discretionary capital grants for SFY11 for rural is \$18,186,116 (includes the new State-of-Good-Repair) and urban capital grants \$13,173,892. This does not include formula capital dollars. Under ARRA, Kentucky urban/rural received \$51.5 million in federal dollars for transit capital projects to build or improve transit infrastructure.

Currently, the many smaller parts of a transit system are not grouped together by various agencies. Bicycle, airport connections and other areas are not tracked for their multi-modal components. However, connections between different modes of transit are critical to developing complete door-to-door routes for users.

Louisville and Lexington have established a vision and made substantial steps forward in bicycle and pedestrian facilities since 2003 with their Louisville Loop and Legacy Trail projects. In 2007, Lexington became a bronze-level community as rated by the League of American Bicyclists. Louisville is currently a bronze and aims to be a gold-level community by 2015 by adding facilities, education, encouragement, evaluation and planning, and enforcement.

However, the group rated Kentucky a "D" in infrastructure, "D" in planning, and "A" in enforcement, policies and programs. The group ranked Kentucky 22 out of the 50 states as a cumulative score.

In addition, trolley routes were established in Lexington to meet the transportation needs of World Equestrian Games, held in fall 2010, which had attendance figures of more than 500,000 people.

RECOMMENDATIONS SUPPORTED BY ASCE

Public transportation is critical to our vitality and quality of life, but these systems are underfunded. As a result, ASCE recommends the following:

- Determine and establish an ongoing funding mechanism to adequately fund public transportation in Kentucky
- Develop a dedicated statewide transit fund, which will provide a reliable source of funding and streamline the process of securing funds
- Utilize state university research programs to develop a statewide and region transit needs assessment each year
- Create a state transit authority, which would have additional powers similar to other states, including budgeting and oversight of transit fund
- Create a website for the general public that links all available transit providers and route information into an easy-to-use tool
- Increase the number of park-and-ride lots by 10 percent on surplus government property
- Create a task force that will study a tiered tax based on vehicle-miles-traveled and any other alternatives for a stable funding future
- Create a statewide employer tax credit for van-pooling, bicycle ridership, walkers or transit use
- Encourage Kentucky Transportation Cabinet to track transportation spending by mode, in addition to funding source

- Create a task force to study the possibilities of a public-private partnership with the proposed transit agency and existing heavy rail providers
- Promote an infrastructure awareness day for state legislators during the 2010-2011 session
- Encourage Kentucky's leaders to meet leaders in other states that have developed their transit organizations as we move into the future

GRADE

Kentucky's transit and rail systems were last evaluated in the 2003 Kentucky Infrastructure Report Card in which they were assigned a grade of D. Each of the 120 counties in Kentucky, however, now has some form of transit as a result of emphasis from the Area Development Districts. Eighty percent of commuters ride to work alone, and 1.2 percent ride public transportation. Louisville and Lexington have made substantial steps forward in bicycle and pedestrian facilities since 2003, with their Louisville Loop and Legacy Trail projects. In 2006, 7.1 million tons of freight was moved by rail in the state. Funding from the American Recovery and Reinvestment Act of 2009 for Amtrak in Kentucky totaled \$226,000 and was mostly used for Americans with Disabilities Act (ADA) compliance projects and bus replacements. While there is still significant work to be completed, Kentucky is moving in a positive direction and thus assigned a grade of C-.

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KENTUCKY TRANSIT AND RAIL SUB-COMMITTEE

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SOURCES

1. Alliance for Biking & Walking. (2010). *Benchmarking*. Retrieved December 2011: <http://www.peoplepoweredmovement.org/site/index.php/site/memberservices/C529>
2. Amtrak Government Affairs. (November 2009). *Amtrak Fact Sheet, Fiscal Year 2009 Commonwealth of Kentucky*. <http://www.amtrak.com/pdf/factsheets/KENTUCKY09.pdf>
3. APTA. (May 2007). *2007 Public Transportation Fact book*. Washington, DC. American Public Transportation Association.
4. APTA. (April 2010). *2010 Public Transportation Fact book*. Washington, DC. American Public Transportation Association.

5. APTA. (April 2010). *2010 Public Transportation Fact book, Appendix B: Transit Agency and Urbanized Area Operating Statistics*. Washington, DC. American Public Transportation Association.
6. Destination 2040. (January 13, 2009). *Destination 2040: Choosing Lexington's Future, Final Report*.
<http://www.lexingtonky.gov/Modules/ShowDocument.aspx?documentid=5882>
7. Division of Planning. (August 2007). *2006 Kentucky Statewide Intermodal Freight Plan*. Kentucky Transportation Cabinet.
http://www.planning.kytc.ky.gov/modal_programs/freight.asp
8. Energy and Environment Cabinet. (2010). *Kentucky Division of Waste Management*. Retrieved 2010, from Energy and Environment Cabinet:
<http://waste.ky.gov/Pages/default.aspx>
9. Federal Transit Administration. (2010). *National Transit Database*. Retrieved November 2010: <http://www.ntdprogram.gov/ntdprogram/>
10. Interview with Ms. Cheri Meadows, Division of District Support with the Kentucky Department of Education, December 8, 2010
11. Interview with Mr. Roy Price, Division of District Support with the Kentucky Department of Education, December 8, 2010
12. Interview with Ms. Felicia Harper, Bicycle and Pedestrian Coordinator, Kentucky Department of Transportation, December 9, 2010
13. Kentucky at Work. (2010). *Reporting*. Retrieved December 2010:
<http://kentuckyatwork.ky.gov/Pages/Reporting.aspx>
14. Kentucky Department of Education. (2010). *Transportation*. Retrieved December 2010:
<http://www.education.ky.gov/KDE/Administrative+Resources/Transportation/>
15. Kentucky Transportation Center, College of Engineering. (September 2005) *LEXTRAN Support Project: Strategic Planning Support for LEXTRAN Visioning*. Lexington, KY. University of Kentucky.
http://www.ktc.uky.edu/Reports/KTC_05_24_FR_133_03_1F.pdf
16. KYTC. (2006). *Kentucky Long Range Statewide Transportation Plan*. Kentucky Transportation Cabinet. <http://www.planning.kytc.ky.gov/stp/2006stp.asp>
17. KYTC. (2010, December). *Modal Programs*. Retrieved December 2010, from Kentucky Transportation Cabinet: http://www.planning.kytc.ky.gov/modal_programs.asp
18. KYTC. *Statewide Transportation Improvement Program from FY 2007-2020*. Frankfort. Kentucky Transportation Cabinet.

[http://transportation.ky.gov/progmgmt/stip/06_final/plannedpublictransportation\(transit\)projects.pdf](http://transportation.ky.gov/progmgmt/stip/06_final/plannedpublictransportation(transit)projects.pdf)

http://transportation.ky.gov/progmgmt/stip/06_final/a-8%20public%20transportation%20transit%20projects.pdf

19. KYTC Office of Local Programs. (2010) *Congestion Mitigation and Air Quality*. Retrieved 2010, from Kentucky Transportation Cabinet: http://tea21.ky.gov/air_quality_files/cmaqhome.htm
20. KYTC Office of Local Programs. (2010) *Safe Routes to School*. Retrieved 2010, from Kentucky Transportation Cabinet: <http://saferoutes.ky.gov/>
21. KYTC Office of Local Programs. (2010) *Transportation Enhancement Program*. Retrieved 2010, from Kentucky Transportation Cabinet: <http://tea21.ky.gov/te/tehome.htm>
22. League of American Bicyclists. (September 2010) *Bicycle Friendly Community*. Retrieved November 2010: <http://www.bikeleague.org/programs/bicycelfriendlyamerica/communities/>
23. Louisville Metro Public Works and Assets. (May 2010) *Bike Master Plan*. Louisville, KY. <http://www.louisvilleky.gov/BikeLouisville/bikefriendly/2010bikemasterplan.htm>
24. The Purchase Area Regional Travel management Coordination Center (TMCC). (March 23, 2009). *Demonstration of Enhanced Human Service Transportation Models: Phase 1 – System Development and Design*: U.S. Department of Transportation Federal Transit Administration. Report No. FTA-KY-26-7263-2009.1.
25. US Census Bureau. *Profile of Selected Economic Characteristics: 2000 (for Kentucky)*. <http://factfinder.census.gov/>
26. Waterborne Commerce Statistics Center. *Top 20 Inland US Ports 2003*. www.iwr.usace.army.mil/ndc/wsc/pdf/inlandport03f.pdf
27. Wilbur Smith Associates. (2002). *Kentucky Statewide Rail Plan*. Kentucky Transportation Cabinet. http://transportation.ky.gov/planning/modal_programs/Rail-RailPlan.asp