



Long Distance Trains: A Foundation for National Mobility

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Tim Sullivan, a resident of Syracuse, NY, has ridden the Lake Shore Limited to his job in suburban Chicago eight to ten times a year since 2005.

Summary

Mobility. It's the life-blood of a modern economy. America's mobility is declining—threatening our future prosperity and quality of life.¹ As driving and flying become less attractive and more expensive, Americans are rediscovering trains.

Since 2000, public use of intercity trains has increased three times faster than the population, six times faster than road use and seventeen times faster than air travel.² Train travel reached a new record in 2012.³ Millions of travelers, however, are unable to benefit from trains because the nation's intercity passenger rail system is too small to meet the need.

While Americans have begun to discover the contribution that passenger trains can make to their mobility and quality of life, the debate about the nature and scope of the intercity passenger train system has dismissed one entire category of trains: those that travel long distances between end points.

Long distance train routes form the foundation of the national passenger train network. Their unique capabilities allow them to connect congested urban areas and bring economically viable mobility to rural areas and small towns, many of which are becoming more isolated from major cities as regional airline and intercity bus service disappears.

The time has come to transform the nation's long distance passenger train network from a neglected, barebones operation into a robust and thriving mobility machine:

1. **Lengthen trains, increase frequencies and fill gaps in the national network, creating a comprehensive web of routes that provides convenient connectivity at major hubs;**
2. **Make track, signal and station improvements that decrease trip times and increase on time performance;**
3. **Procure high-performance, modern equipment suitable for overnight and longer distance trips.**

Such investments would improve mobility, creating better access to jobs, economic opportunity, education and vital cultural resources for many Americans.

Mobility and a Healthy Economy

Mobility is the foundation of a healthy, vibrant, growing economy. By connecting people, a multi-modal network of travel choices provides a powerful catalyst for innovation and economic development. Mobility is so important to freedom and quality of life that it is recognized as a legitimate—and important—function of government.

For more than seven decades, government has focused public resources on developing road and air transportation. It is increasingly apparent, however, that America cannot continue to rely so heavily on these two transportation modes. The boost they provided to the U.S. economy in the last half of the 20TH century has plateaued.⁴ We are mired in congestion;⁵ travel times are growing;⁶ productivity is falling.⁷ The best we can expect from road and air transportation in the future is maintenance of the status quo. Even that will become increasingly expensive as the nation's population grows.⁸

The United States has begun to recognize the contribution passenger trains could make to our mobility and quality of life.⁹ They can provide travelers with affordable, safe and dependable mobility that allows them to escape congestion, reduce stress and use travel time productively. Investments to upgrade our passenger rail system will produce more dramatic improvements in convenience, speed, safety and affordability than equivalent investments in either road or air.

However, in debating the nature and scope of the nation's future intercity passenger train system, opinion leaders and policy makers have largely dismissed one entire category of trains: those that travel long distances.

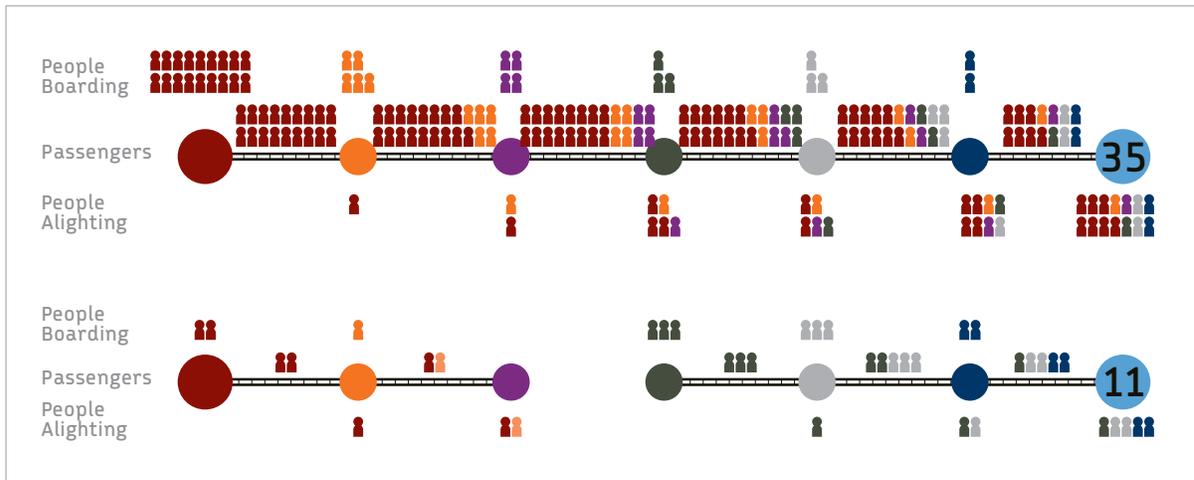
Long Distance Routes: The Foundation for a New National Mobility System

The nation's long distance passenger train network has only 15 routes, most with just one train a day; two with only three per week.¹⁰ Nonetheless, these routes are heavily used. They account for 43% of passenger-miles on the nation's entire intercity passenger train system. (A passenger-mile is one passenger carried one mile.) They carry passenger loads comparable to those of the short distance trains in the Northeast Corridor. They would carry even more passengers if Amtrak had more equipment, greater frequencies and more routes. Lack of service, not lack of demand, is what limits usage.¹¹

Long distance passenger train routes currently perform a significant transportation function. They also represent the foundation on which we could build a national passenger train network that would provide new, high quality mobility choices to a large and geographically diverse cross-section of Americans.¹² Their unique capabilities make them ideal for connecting major urban areas with each other and with smaller cities and communities—many in rural areas—which are becoming more isolated from major economic centers as regional airline and intercity bus services disappear.¹³

Investment in long distance routes would improve mobility in a cost efficient manner and in a relatively short period of time. The largest component—infrastructure—already exists and only requires investment to upgrade its capabilities and gain access for passenger trains. It would only take a few years to acquire a larger fleet of modern equipment.

Multipurpose Mobility Machines



This chart represents a simplified description of the ridership pattern on the Lake Shore Limited, the only train traveling the entire Chicago–Buffalo–New York City corridor. Each peg, color coded to the city where passengers boarded, represents a group of passengers boarding and departing the train. Passengers take a wide mix of trip lengths. Removing the center link would cut ridership by two thirds.

The value of long-distance train routes is often overlooked because of the misconception that air travel has made them obsolete. Many believe that different modes only serve distinctly different markets: the car for trips less than 100 miles, the plane for trips more than 500 miles and, by default, the train only for trips between 100 and 500 miles. This construct is based on the assumption that route length—for reasons neither obvious nor stated—should coincide with trip length, on the misconception that all travelers have the same needs, and on the erroneous notion that trip time is the primary, if not only, consideration for everyone.

Besides trip time, however, other considerations that affect travel decisions include price, schedules, convenience, comfort, safety, accessibility and connectivity. Some people, for example, choose the train for trips shorter than 100 miles because driving isn't attractive or possible; others choose the train for trips longer than 500 miles because they do not live near an airport with affordable air service.

Long distance routes can serve short, medium and long distance markets in ways other modes cannot. The longer the route, the more origin and destination combinations it can serve. A long distance corridor joins many cities and small towns in a linear network. Each stop is linked to every other stop.

Long-distance trains generate high volumes and load factors by:

- Providing a single seat ride in many overlapping city pair markets;
- Combining many small markets to generate economic volumes.

Long distance routes are, in essence, connected and overlapping corridors. Moreover, the utility of individual routes grows exponentially when they become part of an integrated system that provides easy transfers to trains on other routes, feeder buses, local transit systems and airports. Such connectivity serves more people, generates greater revenue, drives economies of scale and improves public mobility.

more coach revenue than it would if it were served only by daytime, short distance corridor trains.

The addition of sleeping car service further increases revenue. The people who choose this premium priced service account for just 17% of passengers but 44% of total route revenue, adding 78% more revenue than coach service alone.

- Sleeping car service generates a disproportionate share of revenue because the average fare per mile is double that in coach and the average trip is 82% longer.
- The average trip in sleeper is longer because few people choose them to make short distance trips. For trips shorter than 500 miles, 97% choose coach. However, even for trips longer than 2,000 miles, 27% more people choose coach than sleeper.



Connections in Los Angeles, Kansas City and Chicago increase revenue even more.

- They increase the number of city pair markets possible far above the 528 served by this route alone.
- More than one in four passengers using the Chicago–Los Angeles corridor begin or end their trips on other routes.
- Connecting passengers generated 89% more revenue than this route would have if operated as an isolated, stand alone corridor.¹⁸

Long Distance Trains: competitive in many markets

Travel Time

Flying is fast once the plane is in the air, but air travel's competitive edge erodes when ground transportation is figured in. Travelers not using busy, competitive airline routes face longer waits between flights and significantly higher fares.¹⁹ As a result, most long-distance trips are usually made by car. Even for trips up to 1,000 miles, more people drive than fly.²⁰

When properly scheduled, trains can be time competitive with driving, especially as trip length increases. On trips over 500 miles, most drivers will take breaks for meals and rest that add significantly to trip time. To save time and money, some drivers deliberately skip



Train travelers gain 500 miles per day by eating and sleeping while the train continues to move.

such breaks. Fatigue, stress, monotony and other factors, however, begin to compromise their ability to operate their vehicle safely, endangering not only themselves and any passengers in their vehicles but also others on the road. The longer the trip, the greater the danger of driving straight through becomes. People on a train, however, move safely while they eat and sleep. They can cover an additional 500 miles or more per day without stress, discomfort or danger to others.

Better Locations, More Markets

Trains have an inherent advantage over air because trains can make many intermediate stops quickly and without using large amounts of fuel.

Stations, because they are less expensive to build and operate than airports, can be located in more places. Moreover, they are, or can be, located in the middle of cities and small towns whereas commercial airports, because of their large land foot-print and noise, are usually located far outside city centers and away from densely populated areas.

Smaller markets do not generate enough traffic to attract low-fare airlines and, with the rising price of fuel and the inefficiencies of short flights and smaller aircraft, are less sustainable for more and more trips, with air service becoming prohibitively expensive or nonexistent.²¹

These markets are also losing intercity bus service.²² For those that still have it, intercity buses frequently opt for stations inconveniently located at truck stops near major highways to avoid spending the time required to wind through neighborhoods to access town centers. Most low fare curbside buses travel non-stop or nearly so between major cities, and do not serve smaller intermediate communities.

Trains represent a cost effective way to restore mobility choices to cities and towns of all sizes along a railroad corridor in a way that neither air nor bus service can accomplish. Because trains provide more convenience and accessibility for the nation's smaller cities and towns, they offer urban renewal opportunities for communities that have lost population or businesses to larger metropolitan areas over the last few decades. Significant redevelopment has been sparked by creation of multimodal transportation centers even in places where the catalyst was just one daily Amtrak round-trip.²³

The Chicago-New Orleans corridor serves many markets that don't have access to mainline air service.



Easily Expanded to Meet Demand

Long-distance routes offer a way to provide a new, high quality mobility choice in many travel markets. Because these routes can aggregate many low-volume city pair markets into economically viable volumes, long-distance routes are an especially effective way to maximize the number of Americans who would experience the benefits of such investments in a relatively short period of time. Investment in long distance routes also can be the first of a series of investments that build toward higher speed services on more heavily traveled route segments in the future.

Consider the route between Chicago and Cleveland. This route currently has just two trains a day in each direction—both with unattractive late night or early morning arrival and departure times at Cleveland. More than 11 million Americans live within 25 miles of one of the nine stations on this 341-mile corridor.²⁴

This market should have hourly departures with a transit time of less than three hours. But this level of service will require long stretches of track dedicated to passenger trains. There will be substantial lead times to design, finance and construct this needed infrastructure.

A relatively low cost and low risk method to expand service in this market would be to work in partnership with the Norfolk Southern and CSX railroads to add daytime frequencies to the existing Chicago–New York Lake Shore Limited route with stops in Toledo, Cleveland, Buffalo and 14 other cities. If scheduled correctly, the trains would make it possible to schedule a reasonable day trip to all cities. Even with a low share of the Chicago–Cleveland market, this long distance service would still generate economically viable volumes because it would serve 171 city pair markets instead of just 36.²⁵

Similarly, long distance routes would make it possible to launch new services in other markets that would benefit more Americans more quickly and more economically than expanding road and air capacity. Gridlock, frequent spikes in the price of fuel—and the negative impact on American pocketbooks

and quality of life—make new choices that can ease or eliminate such economic stresses increasingly important.

Fuel Efficiency

A steel wheel running on a steel rail generates very little friction compared to rubber-tired vehicles like cars and trucks. A freight train can move one ton almost 500 miles on a gallon of fuel.²⁶ A diesel-powered passenger train can move nearly two and one-half times more people per gallon than a typical automobile.²⁷ Airplanes burn significant amounts of fuel for take-offs and landings, making short and medium distance trips less economic at the current and future price of fuel. Because trains use fuel efficiently and do not have a significant fuel penalty for stops, the cost of train travel is not as heavily influenced by fuel prices as the cost of air and road travel. As a bonus, passenger trains can offer more room to sit, stand and move around. Economy passengers can relax in fully reclining seats as wide as the first-class seats on airplanes; sleeping car passengers can have private rooms with a bed.

Cost Efficiency



Trains can offer more varied and comfortable accommodations because they are so fuel efficient.

Long distance trains are cost efficient—a finding that may surprise many. Despite years of neglect, underinvestment and retrenchment, Amtrak’s cost to move one passenger one mile (the accepted industry measure of efficiency) is roughly the same for both long-distance and in-state routes on corridors outside the Northeast. This parity is not obvious in Amtrak’s financial reports because these reports include state—but not federal—payments for service as revenue.

Passenger fares on long distance trains cover nearly all of the costs of fuel, equipment maintenance, servicing, train crews, supplies and food. Public funding is needed to cover the costs of infrastructure, stations and overhead functions. A comprehensive national system with more routes and greater frequencies will require a higher level of public support. But since many of these costs are fixed, expanded service would increase efficiency and lower the public cost per passenger mile.²⁸ Congress could lower this cost even further by funding

the purchase of modern, high performance trains to replace Amtrak's aging long distance fleet and to provide the capacity needed to add extra cars to existing trains and to launch new service. New equipment costs less to maintain.

Goals like “operational self-sufficiency,” “profit” or “minimize federal operating support” are neither reasonable nor sound public policy objectives. Their effect is to block improvements needed to modernize the nation's intercity passenger train system and rejuvenate our increasingly expensive and dysfunctional transportation system.²⁹ The driving purpose should be to harvest the public benefits that trains produce for the communities they serve and for the nation as a whole. Studies have found that even one train a day produces benefits that exceed costs.³⁰

More Choices, Greater Mobility

Our world is changing rapidly. Baby boomers are aging. Young people give Internet access higher priority than having a car. Congestion, cost, personal technology and other long term forces are causing more and more Americans to choose the train in all its forms over other mobility options—*when they have that choice*. Unfortunately, most Americans do not have the choice, which makes the need for trains all the more urgent.

People with choices are better able to adapt to, and less likely to suffer from, changing circumstances and new realities. People with fewer choices have less freedom to adapt. People without choices are trapped.

The time has come to transform the national passenger train network from a neglected, bare-bones operation into a robust and thriving mobility machine.

The federal government could provide a large number of Americans with more attractive mobility choices by funding the improvement and expansion of the nation's intercity passenger train system using long distance routes as the strategic foundation. Such a program would address three key needs:

1. **Lengthen trains, increase frequencies and fill gaps in the national intercity network to create a comprehensive web of routes that provides convenient connectivity at major hubs.**
 - Frequently sold-out trains indicate that the demand exists to justify greater capacity.
 - Additional frequencies would make the train more time-competitive with driving, especially for the majority of travelers who use these routes to make shorter trips; allow daytime service in every community served; increase labor productivity both in stations and on board the train; improve asset utilization, drive economies of scale and raise farebox recovery. Experience demonstrates that higher frequencies attract more passengers and generate greater revenue.³¹
 - The linear nature of the current national network makes it difficult, if not impossible, to make many trips by train. A quick look at a map of the current network shows how few cities have routes in multiple directions. New routes would close gaps, creating a

true, web-like system that would provide direct service in many more major city pair markets.

2. **Make track, signal and station improvements that decrease trip times and improve on-time performance.**

Speed and especially punctuality are important to virtually all passengers, including those making long trips. Take, for example, business travelers, a market segment likely to choose the premium priced sleeping car service that generates a disproportionate amount of revenue. The 780 mile corridor between Chicago and Washington, DC currently has only one train a day. It leaves Chicago at 6:10 PM and arrives in Washington at 12:40 PM the next day, too late for the business traveler to conduct a full day of business in Washington.³² Boosting the average speed just 20 miles an hour would cut trip time to 12 hours, making possible a 7:00 PM departure with an 8:00 AM arrival. Such a schedule in this and many other markets would be attractive to business travelers who want to avoid the airline experience and the cost of a hotel room. Reliability and speed will also drive increased labor productivity, reduced operating costs, greater asset utilization and higher revenue by tapping new markets.

3. **Procure high-performance, modern equipment suitable for overnight and longer distance trips.**

Modern equipment will provide the capacity needed to accommodate current demand, attract new passengers, increase revenue, reduce fuel and maintenance costs, and increase farebox recovery. New equipment is the prerequisite for all initiatives to improve service, add routes, and offer more frequent service on existing routes.



These Chinese sleeper trains operate at speeds up to 155 mph. They offer just one example of modern, high-performance long-distance trains operating around the world.

Conclusion

Mobility lies at the core of economic growth and human progress. By bringing people together, it is the catalyst for the creativity, invention and innovation that has made America the envy of the world.

American mobility is declining. Congestion, ever bigger trucks and rising costs make driving less appropriate and attractive for many trips. Regional feeder flights, the only option in many markets, have been in decline for over a decade as airlines consolidate service into the top three dozen markets.

Lack of choice is un-American and is costing the nation untold billions in lost productivity. In a land that justifiably treasures individual freedom and liberty, government should promote modern transportation choices. For nearly a century, transportation policy at all levels of government has ignored choice and made spending decisions that today burden the budgets of American families with the high cost of using motor vehicles for most travel. It has also condemned to a lower quality of life all Americans who are unable, unwilling or reluctant to travel long distances over congested highways behind the wheel of a motor vehicle.

An interconnected network of passenger trains with modern equipment, dependable service, attractive stations and affordable fares would restore meaningful mobility choice to a large number of citizens for a wide variety of trips. With routes offering multiple frequencies radiating in different directions, a network built on the foundation of long distance routes can revitalize metropolitan areas by making them easily accessible from many points. A web of railroad routes converging in urban cores would create gateways to other routes and other modes, and generate vibrant centers of economic and social activity. It would give the citizens of the world's greatest democracy better access to jobs, economic opportunity, education and vital cultural resources. People with such choices would have the opportunities and quality of life Americans deserve. The need is great. The time to start is now.



Notes

- 1) Since 2000, the U.S. population has grown by 11.6% (33 million people); road travel, however, has grown only 6.7% (43% slower than population) and air travel only 2.2% (81% slower than population). Sources: U.S. Census Bureau, "U.S. POPClock Projection," November 26, 2012, <http://www.census.gov/main/www/cen2000.html> and "Your Gateway to Census 2000," April 1, 2000, <http://www.census.gov/population/www/popclockus.html>. U.S. Department of Transportation, Federal Highway Administration, "Historical Monthly VMT Travel," March 26, 2012, <http://www.fhwa.dot.gov/policy-information/travel/tvt/history/>. U.S. Department of Transportation, Federal Highway Administration, "Historical Summary of Total Enplanements and Commercial Service Airports," October 1, 2012, http://www.faa.gov/airports/planning_capacity/passenger_allcargo_stats/passenger/media/historicalPassengerTotals.pdf
- 2) Public use of the nation's intercity passenger train system has grown three times faster than population. Use of long distance routes has grown twice as fast as population, three times faster when adjusted for route reductions.
- 3) Passenger volume on the intercity passenger train network set new highs in nine of the last ten years and reached an all time record of 31.2 million in the 12 month period ended September 30, 2012, Amtrak, News Release, "Amtrak Sets New Ridership Record; 31.2 million passengers best ever, On-time performance up," October 10, 2012, <http://www.amtrak.com/ccurl/636/294/Amtrak-Sets-New-Ridership-Record-FY2012-ATK-12-092.pdf>
- 4) The economic gains from investment in highways have fallen off since the initial construction of the Interstate Highways. See Congressional Budget Office, "Spending and Funding for Highways," January 2011, p. 4. http://www.cbo.gov/sites/default/files/cbofiles/ftpdocs/120xx/doc12043/01-19-highway-spending_brief.pdf
- 5) "Traffic congestion levels have increased in every area since 1982. Congestion extends to more time of the day, more roads, affects more of the travel and creates more extra travel time than in the past. And congestion levels have risen in all size categories, indicating that even the smaller areas are not able to keep pace with rising demand." Texas Transportation Institute, "2011 Urban Mobility Report," p. B-8, <http://www.mobility.tamu.edu/files/2011/09/how-congested.pdf>
- 6) *Ibid.*
- 7) "In 2010, congestion (based on wasted time and fuel) cost about \$155 billion in the 439 urban areas..." Hours of delay per auto commuter per year ranged from 18 in small areas to 54 in very large areas. *Ibid.*, p. B-15.
- 8) The estimated cost of maintaining road performance at just 2006 levels is \$106 billion per year. U.S. Department of Transportation, Federal Highway Administration, "2008 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance," <http://www.fhwa.dot.gov/policy/2008cpr/es.htm#c4a>.
- 9) Nearly two thirds of Americans support federal and state funding for high speed rail. Harris Poll, January 2011. For additional references, see <http://www.narprail.org/index.php/fact-sheets/335-poll-after-poll-americans-want-trains>.
- 10) Amtrak, "System Timetable," Effective May 7, 2012.
- 11) Several Amtrak routes have been discontinued over the years. Examples include: Los Angeles–Las Vegas–Salt Lake City; Salt Lake City–Boise–Portland; Chicago–Birmingham–Miami/St. Petersburg; New York–Pittsburgh–St. Louis; Chicago–Kansas City–Oklahoma City–Texas; New York–Philadelphia–Chicago; New Orleans–Miami; Minneapolis–Billings–Portland/Seattle. Major metropolitan areas left out of the current intercity network include Las Vegas NV, Columbus OH, Phoenix AZ, Nashville TN, and Chattanooga TN. Important city pair markets not served include: Dallas–Houston, Chicago–Nashville–Atlanta, Atlanta–Orlando–Miami, Denver–Dallas, and Minneapolis–Kansas City.

- 12) Travel between communities too small to qualify as an MSA and those large enough to be designated an MSA represents 46% of the intercity travel market (compared to just 36% between MSA and MSA), U.S. Department of Transportation, Bureau of Transportation Statistics, “American Travel Survey 1995.” In commenting on the record travel volume in FY 2012, Amtrak President Joseph Boardman said, “The ridership record was achieved ‘station by station’ in hundreds of smaller communities across the nation, as widespread demand for travel by rail continues to grow... Amtrak provides a vital transportation service to this country, often serving as the only intercity travel mode in many of the communities we serve.” He noted that intercity bus and air service has declined “precipitously” in many parts of the country in recent years. *Progressive Railroading*, “Lack of access to bus, air service in smaller communities boosts Amtrak ridership, Boardman says,” October 19, 2012, <http://www.progressiverailroading.com/amtrak/news/Lack-of-access-to-bus-air-service-in-smaller-communities-boosts-Amtrak-ridership-Boardman-says--33016> .
- 13) U.S. Department of Transportation, Bureau of Transportation Statistics, “The U.S. Rural Population and Scheduled Intercity Transportation in 2010: A Five-Year Decline in Transportation Access,” February 2011.
- 14) Amtrak, “System Timetable,” Effective May 7, 2012.
- 15) Eric C. Peterson, “An Inventory of the Criticisms of High-Speed Rail with Suggested Responses and Counterpoints,” *American Public Transportation Association*, January 2012, p. 1, “[A] small group of critics have organized themselves into a well-oiled campaign that includes strategies to repeat the criticisms frequently, offer them as fresh criticisms each time they are expressed, and make broad, sweeping claims that sound factual, but upon close examination are usually without fact”; p. 3, “It is hoped that through this project, the record on intercity passenger rail, and especially high-speed rail, will be set straight, and readers will come to understand both the lack of credibility and the limited nature of the attacks leveled at this important element of America’s 21st century transportation system.” This group targets virtually all rail based transportation programs—including high speed rail, transit and long distance trains.
- 16) Amtrak, News Release, October 10, 2012. <http://www.amtrak.com/ccurl/636/294/Amtrak-Sets-New-Ridership-Record-FY2012-ATK-12-092.pdf>
- 17) National Association of Railroad Passengers, “Route Fact Sheets,” based on data from U.S. Census Bureau, 2010 Census. www.narprail.org/resources/ridership-statistics
- 18) William Sheridan, Chief, Market Research and Analysis, Amtrak, e-mail message to Ross Capon, President and CEO, National Association of Railroad Passengers, December 27, 2012.
- 19) Mike Ramsey, “Airline Mergers Leave Airports off the Radar,” *The Wall Street Journal*, September 28, 2011. “Flights [from Cincinnati, OH] are so expensive and inconvenient that engineers and executives at Toyota’s Erlanger, KY manufacturing headquarters now almost always make the frequent, 520-mile round trip to visit their engineering base in Ann Arbor, MI by car...”
- 20) National Association of Railroad Passengers, “The American Travel Market,” September 7, 1999, based on data from U.S. Department of Transportation, Bureau of Transportation Statistics, “American Travel Survey 1995,” <http://narprail.org/resources/white-papers/2132-travelmarketsurvey>
- 21) An estimated 3.5 million rural residents lost intercity transportation access between 2005 and 2010; an additional 3.7 million lost access to at least one transportation mode. America’s senior citizens are especially vulnerable. By 2015, more than 15.5 million Americans 65 and older will live in communities where public transportation is poor or non-existent. U.S. Department of Transportation, Bureau of Transportation Statistics, “The U.S. Rural Population and Scheduled Intercity Transportation in 2010: A Five-Year Decline in Transportation Access,” February 2011. Large metro areas are not immune. The number of flights from Cleveland has dropped 23%, from Pittsburgh 49%, from Cincinnati 68% and from St. Louis 50%. Mike Ramsey, *Ibid*. Moreover, compared with previous generations, today’s young people on average are less interested in driving and more interested in their mobile electronic devices. “Sheryl Connelly, Ford’s futurologist, said the carmaker... [noticed] the propor-

tion of 16-year-olds holding a driving license in the U.S. fell from 50 to 30 per cent in the 30 years to 2008” (*Financial Times*, Dec. 24, 2012). A 2011 Zipcar survey found that 48% of 18- to 24-year-old U.S. drivers said they’d rather have Internet access than a car, if they had to choose one or the other. The use of mass transit, bicycles and walking has grown faster in the past decade than the use of cars.

- 22) U.S. Department of Transportation, Bureau of Transportation Statistics, “The U.S. Rural Population and Scheduled Intercity Transportation in 2010: A Five-Year Decline in Transportation Access,” February 2011.
- 23) Meridian MS, see *Reconnecting America*, “Rail Stations At the Heart of America’s Communities,” http://www.reconnectingamerica.org/assets/Uploads/gasfstations1_9.pdf
- 24) National Association of Railroad Passengers, “Route Fact Sheets,” based on data from U.S. Census Bureau, 2010 Census. www.narprail.org/resources/ridership-statistics
- 25) Amtrak, “System Timetable,” Effective May 7, 2012.
- 26) “Moving freight by rail is 3 times more fuel efficient than moving freight on the highway. Trains can move a ton of freight nearly 500 miles on a single gallon of fuel.” CSX Corporation, <http://www.csx.com/index.cfm/about-csx/projects-and-partnerships/fuel-efficiency/>
- 27) Amtrak’s national intercity passenger train network carried an average of 82 passengers one mile on one gallon of diesel fuel in Fiscal 2011.
- 28) To illustrate, Amtrak estimates that it could increase service frequency on the Los Angeles-New Orleans route 133% from three to seven round trips per week but only increase avoidable cost by 21% and the public cost of service by only 16%. See Amtrak, “PRIIA Section 210 FY10 Performance Improvement Plan, Sunset Limited/Texas Eagle,” September 2010, <http://www.amtrak.com/ccurl/970/304/PRIIA-210-SunsetLtd-TexasEagle-PIP,o.pdf>
- 29) “In 2010, it was estimated that deficiencies in America’s surface transportation systems cost households and businesses nearly \$130 billion...As conditions continue to deteriorate over time, they will increasingly detract from the ability of American households and businesses to be productive and prosperous at work and at home...If present trends continue, by 2020 the annual costs imposed on the U.S. economy by deteriorating infrastructure will increase by 82% to \$210 billion, and by 2040 the costs will have increased by 351% to \$520 billion (with cumulative costs mounting to \$912 billion and \$2.9 trillion by 2020 and 2040, respectively).” *American Society of Civil Engineers*, “Failure to Act: The Economic Impact of Current Investment Trends in Surface Transportation,” 2011, pp. 3-4, http://www.asce.org/uploadedFiles/Infrastructure/Report_Card/ASCE-FailureToActFinal.pdf
- 30) Michigan Department of Transportation, “Michigan Passenger Rail Station Community Benefits Study,” June 2009. R. L Banks Associates for the Montana Departments of Transportation, Commerce and Agriculture, “Analysis of the Economic Benefits of the Amtrak Empire Builder to Montana,” www.mdt.mt.gov/publications/docs/brochures/railways/empire_builder.pdf
- 31) Examples where additional frequencies produced greater public use of existing train service include: Charlotte–Raleigh, NC, service increased from two to three trains per day, volume has jumped 138%; Chicago–Quincy, IL, service increased from one to two trains per day, volume has jumped 95%; Chicago–St. Louis, service increased from three to five trains per day, volume has jumped 128%; Chicago–Carbondale, IL, service increased from two to three round trips, volume has jumped 138%; Sacramento–Oakland–San Jose, CA, service (measured in train miles) increased 110% in eleven years, volume has jumped 128%; Washington, DC–Lynchburg, VA segment of the New York–New Orleans route, service increased from one to two trains per day. Volume on the new Lynchburg train was 168,000 trips per year, evidently not taken from the New York–New Orleans train. Indeed, on the latter, ridership, revenue and passenger miles have increased to levels higher than existed before addition of the Lynchburg train.
- 32) Amtrak, “System Timetable,” Effective May 7, 2012.



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