

BTS Outline of Statistical Highlights and Visuals
C-SPAN Washington Journal: What is the Nation's Infrastructure?
December 9, 2011

The big picture:

The transportation industry is an integral component of the larger U.S. economy. All aspects of the U.S. economy depend upon the U.S. transportation system, which moves, passengers to their work, education, health care and shopping, raw materials to factories and then finished goods to warehouses, retail stores and directly to customers' homes.

Despite recent declines as a result of the recession that began in December 2007, the transportation system has faced growing demands over a longer period to accommodate more passengers and vehicles.

1. OUR NATION'S TRANSPORTATION INFRASTRUCTURE

Visual: *OUR NATION'S TRANSPORTATION INFRASTRUCTURE*

(Description of the make-up of the transportation infrastructure)

2. The nation's infrastructure is enormous

- Nation's infrastructure is vast and varied.
- It connects people to where they want to go.
- It's enormous.

Visual: The Infrastructure is Vast and Varied

(Description of the infrastructure)

3. Transportation infrastructure moves people and goods, and supports nation's economy

- The ability of passengers to transfer from one mode of transportation to another (such as intercity bus to air, or transit bus to Amtrak) increases the effectiveness of the passenger transportation infrastructure to meet the mobility needs of the nation.
- In the coming months BTS will complete the first nationwide database of intermodal connections at passenger terminals. So far, we've measured connectivity at scheduled service airports, intercity and commuter rail station, and ferry terminals.
- Overall 50 percent of terminals have connections with other modes (55% in contiguous 48 states). Commuter rail stations are the most connected, with other modes serving 70 percent of them (most frequently transit bus). Airports are least likely to be reachable by other modes, with connections at only 24% of airports (34% in contiguous 48 states).

Visual: Transportation infrastructure moves people and goods, and supports nation's economy

(Table showing connection data for airports, ferry terminals, intercity rail stations and commuter rail stations)

4. Federal, state and local governments share the cost of public spending on transportation infrastructure and equipment, with most of the federal contribution going to states and localities as grants

- Total government expenditures on transportation capital (infrastructure and equipment) were \$108 billion in 2006.
- \$104 billion was spent by states and localities, and \$4 billion was spent by the federal government.
- But of the \$104 billion, \$38 billion was funded by Federal grants, for a total federal expenditure on transportation capital of \$42 billion

Visual: *Capital spending by federal, state and local governments in 2006*

(Pie chart with two wedges, one showing state and local expenditures on transportation capital, one showing federal expenditure on transportation capital, in 2006)

5. This map shows the flow of freight on America's Highways, Railroads, and Inland Waterways.

- Within the United States, freight moves through an expansive network of roadways, railroads, inland waterways, pipelines, and airways.
- Trucks carry the majority of freight tonnage across the National Highway System.
- Railroads and waterways carry large volumes of freight over long distances.
- Large amounts of coal are moved via railroad between Wyoming and the Midwest.
- The primary movement of freight across waterways occurs along the Lower Mississippi River.

Visual: *Amount of freight moved on highways, railroads, and inland waterways: 2007*

(Map showing freight carried by America's Highways, Railroads, and Inland Waterways.)

6. U.S. transportation system carried 13% fewer tons in 2009 than in 2007.

- The decline in freight shipments shows the impact of the recession that began in late 2007.

Visual: *Measured by weight, freight movements on the U.S. transportation system decreased by 13% from 2007 to 2009*

(Stacked bar chart comparing freight by mode in 2007 and 2009)

7. U.S. freight shipments rose 27 percent over the last 20 years

- U.S. freight ton-miles (which measures a ton of freight moved one mile) increased by about 1.7 percent annually between 1990 and 2007.
- Further breaking this increase down, U.S. had significant increase of 13 percent in freight ton-miles between 1990 and 1995. However, this slowed in recent years with freight ton-miles increasing by only 10 percent between 1996 and 2007.

Visual: *U.S. Freight Shipments Rose 27% Over the Last 20 Years*

(Line graph showing the increase in freight ton-miles between 1990 and 2007)

8. Interstate Highway Miles are 1 percent of the total road miles but carry 24 percent of the total travel.

- Congress called for up to 40,000 miles for a National System of Interstate Highways in the *Federal-Aid Highway Act* of 1944. In subsequent legislation, Congress has expanded the system.
- Interstate highways are constructed to exacting standards, including limited access, at least 50 mile per hour travel, a minimum of two travel lanes in each direction, and paved shoulders.

Visual: *Interstate Highway Miles are 1 percent of the total road miles but carry 24 percent of the total travel*

(Pie chart: Interstate v. Non-Interstate Highway, and Total Miles)

9. Vehicle miles traveled increased 40% in the last 20 years while highway road miles stayed about the same.

- U.S. VMT increased steadily from 1990 to 2010 while highway miles remained comparatively flat, increasing at only 4.8 percent from 1990 to 2009.
- The small increase in highway miles has not kept pace with vehicle traffic.

Visual: *Demand on the system continues to increase, Amount of driving on highway vs. highway miles, 1990-2010*

(Line graph with two lines: one showing the increase in vehicle-miles traveled (1990-2010) and the second showing flat road mileage between 1990 and 2009)

10. Freight shipments by rail rose during the last 20 years until the recent recession while railway mileage declined.

- U.S. rail freight ton-miles increased by 63 percent between 1990 and 2008 while rail miles decreased by 21 percent.
- Growing freight volumes have been moving on a shrinking rail network.

Visual: *Similar trends are observed in freight rail lines, Rail ton miles vs. rail miles, 1990–2008*

(Line graph with two lines: one showing the growth in freight ton-miles and the second showing declining track mileage between 1990 and 2007)

11. Larger cities suffer more road congestion than smaller cities.

- Cities with more than 3 million people face more congestion than smaller cities
- Congestion in larger cities grew faster than in smaller cities until the recession beginning in 2007. Then large city congestion declined more sharply.

Visual: *Higher demand and level roadway capacity contribute to traffic congestion*

(Line graph with two lines: one showing hours of delay due to congestion in cities with more than 3 million people and the second showing congestion in cities with 1 to 3 million people)

12. Older bridges are more likely to be deficient.

- Almost no bridges under 10 years old are deficient.
- More than half the bridges over 100 years old are deficient
- More bridges are 40 to 59 years old than in any other age group.
- About 47.9 percent of rural Interstate bridges were built during the early years of the Interstate System, from 1961 to 1970. More than 68.2 percent of all rural Interstate bridges in 2002 were at least 30 years old.
- About 41.2 percent of urban Interstate bridges were built between 1961 and 1970. Over 61.5 percent of all urban Interstate bridges in 2002 were at least 30 years old.

Visual: *Bridge infrastructure is aging*

(Bar chart comparing the percentage of deficient bridges by age of the bridge)

13. Structurally deficient bridges by state range from 2 percent to 26 percent. (need to account for obsolete)

- In 2010, Pennsylvania has the highest percentage (26 percent) of structural deficiencies bridges; followed by Oklahoma, Iowa, and Rhode Island with a three way tie at 22 percent; South Dakota (20 percent) and Nebraska with 18 percent.
- Nevada and Florida (2 percent) have the lowest percentage, followed by Arizona and Texas (3 percent), and then Utah (4 percent).

Visual: *Percentage of Deficient Bridges by State*

(Map showing percentage of structurally deficient bridges by state)

14. Access to transportation in rural areas varies in different states.

- In general, states with multiple modes covering a large proportion of the rural population can be found in the Northeast except for California, which has extensive Amtrak (intercity rail) and Amtrak Thruway (intercity bus) networks, and Washington.
- In 2010, all rural residents in Connecticut, Delaware, Massachusetts, New Jersey, and Rhode Island had access to at least one intercity public transportation mode (air, bus, ferry, or rail). In contrast, less than 60 percent of rural residents in North Dakota had access to at least one mode.

Visual: *In 2010, one in every four rural Americans had no access to intercity transportation services*

(Map showing modal coverage in rural areas by the air, intercity bus, intercity ferry and intercity rail modes in 2010)

15. Intercity bus provides the most access in rural areas.

- In 2010, 71.7 million (89 percent) of the 80.6 million rural residents in the U.S. lived within the coverage area of intercity air, bus, ferry, or rail transportation.
- An estimated 3.5 million rural residents lost intercity transportation access between 2005 and 2010. An additional 3.7 million, who still had intercity transportation service in 2010, lost access to at least one transportation mode during the five year period.
- Intercity bus transportation provided the greatest coverage across rural America in 2010 despite declining from 89 percent in 2005 to 78 percent in 2010. The percent of rural residents covered by air service remained unchanged (72 percent); while the percent covered by intercity rail declined from 42 percent to 40 percent of the rural population.

Visual: *Between 2005 and 2010, 3.5 million rural residents lost access to scheduled intercity transportation*

(Table comparing the percentage of rural access by mode in 2005 and 2010)

16. Transit ridership grew from 1995 to 2009 (need to define transit on slide)

- The nation's transit systems handle an average of 27 million individual trips per day (including weekends) on transit buses, subways, light rail, commuter rail and streetcar trains, and paratransit.

Visual: *Transit ridership increased by 33% from 1995 to 2009—to 10.4 billion trips a year*

(Line graph showing the number of transit passengers from 1995 to 2009)

17. Transit conditions include stations, tunnels and vehicles

- Rail transit vehicles average 18-years-old.
- Transit buses are at least six years old.
- Most transit stations are not in good or excellent condition.
- Unlike stations, most transit tunnels are in excellent or good condition.

Visual: *Transit infrastructure condition*

(Bullets describing condition of transit infrastructure and age of transit vehicles)

18. Airline passenger traffic grew by 60% from 1990 to 2010 but air freight grew by 135%.

- Annual passengers peaked at 841 million in 2007
- Air freight peaked at 9.7 million tons in 2007
- Passengers and freight decreased due to the fuel crisis in 2008 followed by the recession in 2009
- There has not been a complete recovery in passengers or freight

Visual: *Air passenger travel grew 60% and air freight grew 135% from 1990 to 2010*

(Line graph with two lines: one showing the number of airline passengers and the other showing the tons of air freight from 1990 through 2010)

19. Airports saw increasing passenger traffic over the last 20 years..

- Atlanta, the top airport in 2010, had 61 percent more passenger departures than the top airport in 1990, Chicago O'Hare.
- Four airports in 2010 had more passenger departures than the number one airport in 1990.
- Miami and New York LaGuardia dropped out of the top 10 from 1990 to 2010 and were replaced by Houston Bush and Las Vegas.

Visual: *In 2010, the top 10 airports accounted for almost one-third of all air passenger travel*
(Table showing the top 10 airports by number of departing passengers in 1990 and in 2010)

20. Airline passenger traffic grew by 60% from 1990 to 2010 but air freight grew by 135%.

- Airlines and the aviation system (air traffic control and airports) are each responsible for slightly less than a third of flight delays
- More than a third of delays are attributed to the late arrival of the previous flight using the same aircraft
- Extreme weather is responsible for a small percentage of delays although weather would also be the cause of delays attributed to the aviation system and late arriving aircraft. BTS calculates that 40% of delays are attributable to weather.

Visual: *Causes of flight delays, Jan-Sept 2011*

(Pie chart showing the causes of delay from January through September 2011)

21. Lengthy tarmac delays dwindled to a handful after the DOT 3-hour rule went into effect in April 2010

- 3-hour tarmac times reached 268 in June 2009
- The most in a single month since the rule went into effect were 16 in May 2011, 15 in a single day at O'Hare.
- There were four months in the past year with zero 3-hour tarmac times

Visual: *The majority of the tarmac delays in May 2011 were due to weather issues*

(Bar chart showing the number of 3-hour tarmac times by month from Oct 2008 through Sept 2011)

22. Northeast airports have the lowest and western airports have the highest on-time performance.

- Airports in the Northeast were four of the five bottom airports in both 1990 and 2010.
- In 2010, four of the top five airports were in the west plus Charlotte in the south.
- Seattle moved from the major airport with the lowest on-time arrival performance in 1990 to the highest in 2010. Alaska Airlines, the major airline at Seattle, has been a leader in adopting new technologies.

Visual: *Percentage of On-Time Arriving Flights at Major Airports in the U.S.*

(Table showing top five and bottom five major airports for on-time arrival performance in 1990 and 2010)

23. Runway pavement conditions have improved from 1990 to 2010.

- The percentage of runways in good condition increased from 60 percent in 1990 to almost 80 percent in 2010.
- The percentage in fair and poor condition has declined from 40 percent in 1990 to slightly more than 20 percent in 2010.

Visual: *Runway pavement conditions improved over time*

(Stacked bar chart showing runway pavement conditions as poor, fair or good from 1990 to 2010)

24. The ports of Los Angeles, Long Beach, and New York are the leading U.S. container ports.

- The ports of Los Angeles, Long Beach, and New York are the leading U.S. ports (in terms of Twenty-foot Equivalent Units or TEU, the standard unit of measure for counting shipping containers).
- These three major seaports account for over 51 percent of the container throughput. However, ports along the Atlantic and Gulf coast (e.g., the ports of Savannah, Norfolk, and Houston) have increased significantly over the past two decades.

Visual: 86 percent of the total import and export container traffic moves through the top 10 ports (Table showing the top 10 U.S. container ports and their percentage of total container traffic in 2010)

25. Half of Air, Rail and Ferry Passenger Terminals Offer Intermodal Connections

- The ability of passengers to transfer from one mode of transportation to another (such as intercity bus to air, or transit bus to Amtrak) increases the effectiveness of the passenger transportation infrastructure to meet the mobility needs of the nation.
- In the coming months BTS will complete the first nationwide database of intermodal connections at passenger terminals. So far, we've measured connectivity at scheduled service airports, intercity and commuter rail station, and ferry terminals.
- Overall 50 percent of terminals have connections with other modes (55% in contiguous 48 states). Commuter rail stations are most connected with other modes serving 70 percent of them (most frequently transit bus). Airports are least likely to be reachable by other modes, with connections at only 24% of airports (34% in contiguous 48 states).

Visual: Percentage of Passenger Transportation Terminals with Connectivity to Other Modes

(Bar chart showing percentage of terminals by mode with intermodal connections)