

Analysis of Travel Demand for High-Speed Rail Investment

Regional Plan Association analyzed intercity travel demand among the nation's largest cities to determine the corridors most suited for intercity passenger travel. The following criteria were used to determine travel demand, creating an index that ranked city pairs by level of priority for high-speed rail investment.

- City size of 50,000 or more, favoring larger populations.
- Metropolitan area population, favoring cities in larger metropolitan areas.
- Distance between city pairs, favoring distances between 100 – 500 miles, with 250 miles receiving the highest value.
- Location within a megaregion.
- Metropolitan GDP, awarding value on the basis of their combined average GDP.⁴
- Existence of transit, including heavy rail, light rail, or commuter rail.
- Extent of transit system, including heavy rail, light rail, or commuter rail.
- High levels of auto congestion, as measured by the TTI congestion index.

These criteria were weighted and summed in an index that scored the city pairs on their level of market demand for high-speed rail. This index rated the top 250 rail corridors among city pairs greater than 50,000 people.⁵ This analysis

⁴ For a discussion of how income is correlated with increased mobility see G. Ingram and Z. Liu (1999), "Determinants of Motorization and Road Provision," Essays in Transportation Economics and Policy: A Handbook in Honor of John R. Meyer, Ed. Gomez-Ibanez, J. and Tye, W. Washington, DC: Brookings.

informed the creation of a map of priority routes for intercity rail service, which also took into account existing Amtrak intercity routes, the FRA HSR designated corridors, the proposed 2050 Intercity Passenger Rail Network of the National Surface Transportation Policy Revenue and Study Commission, and consultation with the America 2050 Intercity Passenger Travel Working Group. Three levels of priority for investments in new and existing rail corridors were determined:

- **High-Speed Rail:** priority corridors for high-speed passenger service with dedicated rights-of-way (ROW). Technology and service should be determined through a planning process that takes into account the unique circumstances affecting each corridor, including terrain, travel demand, and timetable for transportation connections.
- **Incremental High-Speed Rail:** priority corridors for incremental infrastructure and service improvements, including electrification, greater frequency, higher speeds, and removing conflicts with freight services.
- **Corridor and Long-distance Service:** viable and existing corridors for intercity service, suitable for incremental infrastructure and service improvements.

As noted by the GAO, sound investment in high-speed rail will require consistent improved methods of projecting intercity travel demand. This brief provides an example of the type of analysis that should shape a federal policy for intercity passenger transportation. An illustrative map of the Trans-American Passenger Network shaped by this analysis is within.

⁵ For a complete summary of this analysis, see working paper, "Beyond Driving and Flying: Briefing Paper of the America 2050 Passenger Rail Working Group." (Dec 2008). New York: Regional Plan Association.

America 2050 Why We Need a Trans-American Network

April 17, 2009 By Petra Todorovich, Director, America 2050

This week President Obama announced his Administration's plans for the most significant investment in intercity and high-speed rail in a generation. With the \$8 billion down payment made in the American Recovery and Reinvestment Act and an additional \$5 billion in his proposed budget, Obama has signaled the start of a new era of commitment to intercity passenger rail after decades of disinvestment and lack of federal support.

But as the President noted, these investments are just the beginning of building a smart transportation system equal to the needs of the 21st century. Infrastructure investment can, and should, play a central role in repairing America's economy and positioning the country for long-term, sustainable economic growth. But to do so requires investments on the scale of the nation's Interstate Highway System, which shaped America's landscape in the post-war era as the nation added 130 million residents from the years 1950-2000. This time around, as we project the growth of 140 million additional people by 2050, the investments should go far beyond building roads.

We need a "Trans-American Network," of national intercity passenger travel and goods movement investments organized around our nation's megaregions—vast regions formed around the travel patterns, business relationships and manufacturing chains of the global economy. In our nation's metropolitan regions—like the NY-NJ-CT region—we need investments in road pricing and congestion management, regional rail, local transit, walking and biking improvements and transit-oriented development. The Trans-American Network and the regional and local investments will likely take a generation or more to implement—which is why we must get started today.

In the spirit of President Obama's announcements, this brief offers recommendations to help shape America's approach to and investments in intercity passenger travel. In the coming months, America 2050 will release additional briefs on a national goods movement network and policies to support metropolitan mobility.

These recommendations were informed by the America 2050 Intercity Passenger Travel Working Group, which met from October – December 2008 as part of America 2050's efforts to develop a Trans-American Network¹ and recent reports, such as the report of the U.S. Government Accountability Office (GAO) on high-speed rail² and the Passenger Rail Working Group of the National Surface Transportation Policy Revenue and Study Commission.³

¹ Participants included: Polly Trottenberg, Jeffrey Zupan, Yoav Hagler, Beth Nachreiner, John C. Bennett, Eugene Skoropowski, Karen Rae, Steve Lockwood, Clyde Hart, Mitch Warren, Nazih Haddad, Frank Busalacchi, Robert Yaro.

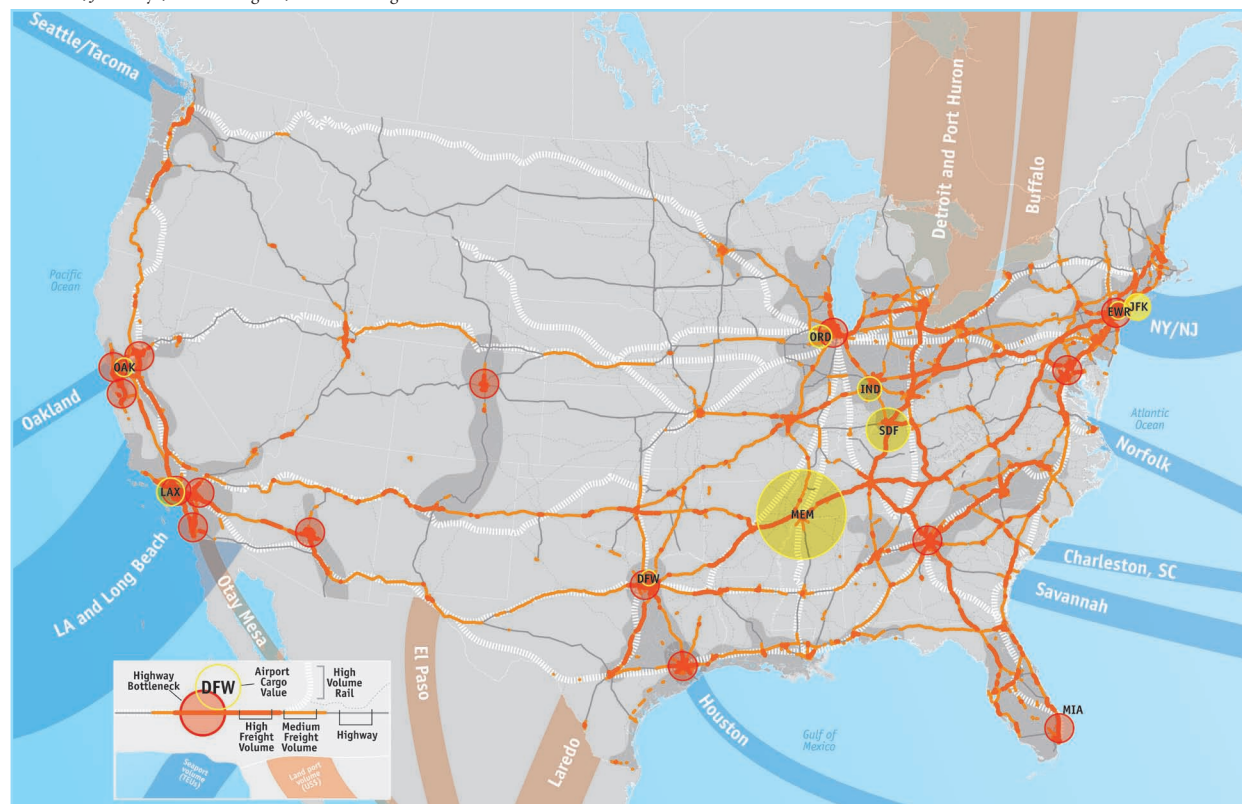
Recommendations for a Trans-American Passenger Network

- **Intercity passenger rail should be seen as one element of a comprehensive intercity passenger network for common carriers,** which includes air travel, intercity rail, and bus services. An emphasis on coordinating these services within the megaregions and enhancing links between intercity travel, regional, and local travel will leverage the government's investments, maximize ridership, and enhance mobility options for passengers.
- **Federal investments in intercity rail should be directed toward corridors with the greatest demand for intercity travel,** generally city pairs located 100 – 500 miles from each another, with growing populations, economies, and the presence of regional and local transit networks that can provide connections for intercity passengers. America's 11 emerging megaregions are among the prime areas suited for intercity rail investment.
- **Intercity passenger travel must be supported by federal policies and leadership.** Currently, the Federal Rail Administration (FRA) plays mostly a regulatory and safety role, and does not include intercity air or bus travel in its scope. We recommend establishing within the U.S. DOT an Office of Intercity Passenger Travel, which would coordinate investments and policies for intercity air, rail, and bus travel and promote network connectivity and integrated ticketing and scheduling. Ideally, this office could be organized by megaregions to fully integrate transportation services across state boundaries.
- **All Americans should have access to travel options for intercity travel.** The nation's Trans-American Passenger Network should include an Essential Transportation Service (modeled after Essential Air Service), providing high-quality coach bus service from population centers of at least 10,000 to intercity air or rail transportation hubs.

The map on the next page is the result of the RPA analysis, described on the back page.

² United States Government Accountability Office.(March 2009). High Speed Passenger Rail: Future Development Will Depend on Addressing Financial and Other Challenges and Establishing a Clear Federal Role.

³ Passenger Rail Working Group (December 6, 2007). Vision for the Future: U.S. Intercity Passenger rail network through 2050.



Trans-American Freight Network: Investments should alleviate highway and rail bottlenecks, electrify the rails, and green the nation's seaports.

Trans-American Passenger Network

