



**Congressional  
Research Service**

Informing the legislative debate since 1914

---

# Freight Infrastructure Issues in Surface Transportation Reauthorization

**John Frittelli**

Specialist in Transportation Policy

**William J. Mallett**

Specialist in Transportation Policy

March 16, 2015

**Congressional Research Service**

7-5700

[www.crs.gov](http://www.crs.gov)

R43940

## Summary

Goods movement has increased substantially over the past few decades as the economy and global trade have expanded. Freight transportation demand in tandem with passenger-side demand has caused congestion in many parts of the transportation system, resulting in slower and less reliable freight movement. Also, the condition and performance of freight infrastructure play considerable roles in the efficiency of the freight system and, therefore, are likely to be of significant congressional concern in the reauthorization of the surface transportation program that is currently authorized through May 31, 2015.

There is no specific federal freight transportation program. Instead, the federal government supports freight infrastructure through several programs that promote both passenger and freight mobility. The most important of these are four of the five “core” programs of the federal-aid highway program, which together account for roughly 90% of highway spending. One of those five programs, the Surface Transportation Program, also provides limited support for freight rail projects. Federal assistance to ports and inland navigation, waterborne shipping, and air freight are beyond the scope of this report.

There is significant disagreement about the best way to accomplish improvements in freight system infrastructure. Among the most important points of contention are:

- The magnitude of the investments required and related policies to manage demand for existing transportation infrastructure as an alternative to increasing capacity.
- How to cover the cost. Most federal freight investments are currently funded through the highway trust fund, whose main source of revenue is taxes on motor fuels. These taxes no longer raise sufficient revenue to fund existing federal surface transportation programs, and proposals to increase federal spending on freight infrastructure are often linked to other fees or taxes that have not gained support in Congress.
- How to set priorities. Most federal highway funding is distributed by formula to state departments of transportation, which determine spending priorities in cooperation with metropolitan planning organizations. This process forces freight projects to compete with passenger-oriented projects, which may have greater support—especially when a proposed freight project primarily benefits so-called through trucks (rather than trucks making local pick-ups and deliveries). Changes in the law to establish priority for freight infrastructure would run contrary to the trend in recent reauthorization acts to give states greater discretion over their spending of federal highway funds.
- The role of the federal government in the planning process. The 2012 surface transportation reauthorization, the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141), established a performance measurement system for state departments of transportation and metropolitan planning organizations. However, these provisions have yet to be fully implemented. Eventually, they are intended to lead to federal evaluation of state and local decision-making, which is likely to prove controversial.

## Contents

Introduction.....	1
The Freight Transportation System.....	1
Freight Bottlenecks.....	3
Current Federal Freight-Related Program Elements.....	5
Grant Programs.....	5
Financing Initiatives.....	7
TIFIA Program.....	8
RRIF Program.....	8
State Infrastructure Banks.....	9
Tax-Preferred Debt Financing.....	9
Issues and Options for Congress.....	10
Funding Needs in Freight Infrastructure.....	10
Truck Size and Weight.....	11
Setting Priorities.....	12
Freight Planning and Performance Management.....	13
Funding and Financing Options.....	14
Recent Legislative Proposals.....	16
113 <sup>th</sup> Congress.....	16
114 <sup>th</sup> Congress.....	17

## Figures

Figure 1. Peak-Period Congestion on High-Volume Truck Portions of the NHS.....	4
--	---

## Tables

Table 1. Domestic Freight Shipments by Selected Modes, 2012.....	2
Table A-1. Most Congested Freight-Significant Highway Locations: 2012.....	18

## Appendixes

Appendix. Congested Freight-Significant Highway Segments (2012).....	18
--	----

## Contacts

Author Contact Information.....	19
---------------------------------	----

## Introduction

Economic growth and expanded global trade have led to substantial increases in goods movement over the past few decades. The growth in freight transportation demand, along with growing passenger-side demand, has caused congestion in many parts of the transportation system, making freight movements slower and less reliable. Because the condition and performance of freight infrastructure play a considerable role in the efficiency of the freight system, federal support of freight infrastructure investment is likely to be of significant congressional concern in the reauthorization of the surface transportation program. The program is currently authorized by the Moving Ahead for Progress in the 21st Century Act (MAP-21; P.L. 112-141) as extended to May 31, 2015, in the Highway and Transportation Funding Act of 2014 (P.L. 113-159).

There is significant disagreement about the best way to accomplish improvements in freight system infrastructure. Among the most important areas of disagreement are how to raise new funds for investment, the magnitude of the amounts required, how to set priorities, and the role of the federal government in the planning process. To some extent, these disagreements emerge from the diversity and complexity of the freight system itself, including its modal organization (truck, rail, water, air, and pipeline), the different levels of public and private ownership and involvement by mode, and competition among different regions of the country.

The reauthorization of MAP-21 predominantly concerns highway funding. Consequently, the focus of this report is on truck freight and that portion of the rail industry that transports truck trailers and containers (intermodal freight). This report does not deal with operational issues that also may be of interest during reauthorization, such as hours of service and hazardous material transport safety.<sup>1</sup> Moreover, this report does not discuss environmental issues associated with freight movements such as carbon emissions and climate change, air pollution emissions, and noise.<sup>2</sup>

## The Freight Transportation System

The freight transportation system is a complex network of different types of transportation, known as modes, that carries everything from coal to small packages. It handles domestic shipments of a few miles as well as international shipments of thousands of miles. Rail carries the largest share of domestic freight measured in ton-miles,<sup>3</sup> but only a small proportion by value (**Table 1**), reflecting the fact that major rail cargos such as coal and grain have low ratios of value to weight. Trucks carry far more freight by value but less by ton-miles, as the average truck shipment travels a much shorter distance than the average rail shipment. Air transportation is a relatively minor mode for domestic shipments because it is expensive to ship goods by air. The proportions for international shipments to and from the United States are quite different than

---

<sup>1</sup> For transportation issues related to the domestic energy boom, see CRS Report R43390, *U.S. Rail Transportation of Crude Oil: Background and Issues for Congress*, by John Frittelli et al., and CRS Report R43653, *Shipping U.S. Crude Oil by Water: Vessel Flag Requirements and Safety Issues*, by John Frittelli.

<sup>2</sup> On these topics, see CRS Report R40506, *Cars, Trucks, and Climate: EPA Regulation of Greenhouse Gases from Mobile Sources*, by James E. McCarthy and Brent D. Yacobucci.

<sup>3</sup> A “ton-mile” is one ton of freight shipped one mile.

those for domestic shipments, with about three-quarters of goods, measured by weight, arriving or departing by ship. Measured by value, nearly one-fourth of U.S. international freight moves by air.<sup>4</sup>

**Table I. Domestic Freight Shipments by Selected Modes, 2012**

Mode of Transport	% of Total Value	% of Total Tons	% of Total Ton-Miles	Average Miles per Shipment
Truck	74%	70%	38%	216
Rail	3%	16%	45%	811
Air	3%	<1%	<1%	1,229
Parcel, USPS, Courier	12%	<1%	1%	879
Truck and Rail	2%	2%	7%	1,004
Pipeline	2%	6%	NA	NA
Water	2%	4%	6%	842

**Source:** U.S. Department of Transportation, Bureau of Transportation Statistics (BTS), and U.S. Census Bureau, *2012 Commodity Flow Survey, Preliminary Tables*, December 2013.

**Notes:** One ton-mile is equal to one ton of freight transported one mile (a measure of both weight and distance). Figures do not total to 100% due to shipments by other multiple modes and due to rounding.

Trucks run over a four-million-mile system of highways and streets. Of this, approximately 209,000 miles has been designated by the Federal Highway Administration (FHWA) as the “National Truck Network,” a network of highways able to accommodate large trucks. This network includes the Interstate Highway System, which extends approximately 47,000 miles, plus principal arterial highways designated by the states.<sup>5</sup> Trucks account for about 9% of vehicle miles traveled on the entire U.S. road system, but 15% of vehicle miles on Interstates and 24% on rural Interstates.<sup>6</sup>

The railroad sector is dominated by seven large railroads, or Class I carriers, that generally focus on long-distance moves. The Class I railroads are complemented by more than 500 short line and regional railroads (Class II and III) that tend to haul freight shorter distances, provide connections between the Class I networks, or connect the Class I network and ports. For the most part, railroad infrastructure, including track and associated structures and the land they occupy, is owned by the carriers themselves. The U.S. railroad network consists of approximately 140,000 miles of railroad, of which approximately 94,000 miles could be considered transcontinental or mainline railroad and 46,000 miles could be considered regional or local railroad. In some places, freight trains share space with intercity and commuter passenger trains.

Although trucks and railroads often compete for shippers’ business, they also may work together to complete freight movements. This is especially true in the case of long-distance movements.

<sup>4</sup> U.S. Department of Transportation (DOT), Federal Highway Administration, Office of Freight Management and Operations, *Freight Facts and Figures, 2013*, figure 2-5, [http://ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/docs/13factsfigures/figure2\\_05.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/13factsfigures/figure2_05.htm).

<sup>5</sup> The network is identified at 23 C.F.R. §658.

<sup>6</sup> DOT, *Highway Statistics 2012*, Table VM-1, <http://www.fhwa.dot.gov/policyinformation/statistics/2012/>.

Railroads have established large intermodal yards designed for easy transfer of containers between trucks and trains at locations such as Edgerton, KS (BNSF) and North Baltimore, OH (CSX). In the face of high operating costs and a lack of drivers willing to undertake week-long trips, many truck lines now pick up freight from a shipper's premises, carry it to an intermodal terminal for transfer to a train, and then collect it at another intermodal terminal for delivery to its final destination. International shipments of containerized goods often move by rail between ports and inland terminals, with a truck connection to and from the rail terminal. This is why, as indicated in **Table 1**, freight shipments moved by a combination of truck and rail tend to travel greater distances than goods moved by either mode singularly.

Over the last decade, intermodal traffic has increased by nearly 30% (measured by the number of containers and truck trailers moved by railroads), making it the fastest-growing freight segment.<sup>7</sup> While international trade growth traditionally has been the driver of intermodal growth, in recent years the number of domestic intermodal shipments has risen to nearly match the number of international shipments to and from the United States.

Tonnage carried by trucks as a single mode has increased 14% over the last decade while rail tonnage carried as a single mode has increased by 7%.<sup>8</sup> By 2040, U.S. DOT is forecasting that truck tonnage will increase by 43%, rail tonnage by 37%, and multimodal tonnage (of which intermodal is a subset) by 125%.<sup>9</sup> Since 2011, the volume of coal carried by railroads, their most important revenue source, has declined significantly, while crude oil and drilling sand have suddenly become significant commodities for rail.

The expansion of the Panama Canal, expected to be completed in early 2016, will allow the passage of container ships almost three times the current maximum capacity. The project may draw more Asian cargo through East or Gulf Coast ports at the expense of West Coast ports, but this is uncertain. Similarly, the enlarged canal could lead more grain grown in the Mississippi Valley to be shipped to Gulf Coast ports by barge for export to Asia rather than being shipped to West Coast ports by rail. The development of trade patterns will depend in part on the Canal's tolls and U.S. railroad rates. The arrival of larger container ships at Gulf Coast and East Coast ports could also exacerbate a persistent problem with moving trucks through port terminal gates efficiently.

## Freight Bottlenecks

Growth in freight and passenger transportation demand has brought an increase in truck and rail congestion. This congestion is particularly pronounced in major urban areas that contain important freight hubs such as ports, airports, border crossings, and rail yards. As identified by the U.S. Department of Transportation (DOT), the 25 most congested segments for trucks are generally urban Interstate highway interchanges (see **Appendix**). Six of the 25 most congested segments are in Houston and three are in Chicago. A trucking industry study estimates that 89% of the total costs of congestion for trucks are concentrated on 12% of Interstate highway mileage.<sup>10</sup> **Figure 1** depicts congestion on the highway system in the Southeast in 2011 during

<sup>7</sup> According to the Association of American Railroads, 12.83 million containers and trailers were moved in 2013 while 9.96 million were moved in 2003.

<sup>8</sup> DOT, *Freight Facts and Figures*, 2008 and 2013 editions, Table 2-1 – Weight of Shipments by Transportation Mode.

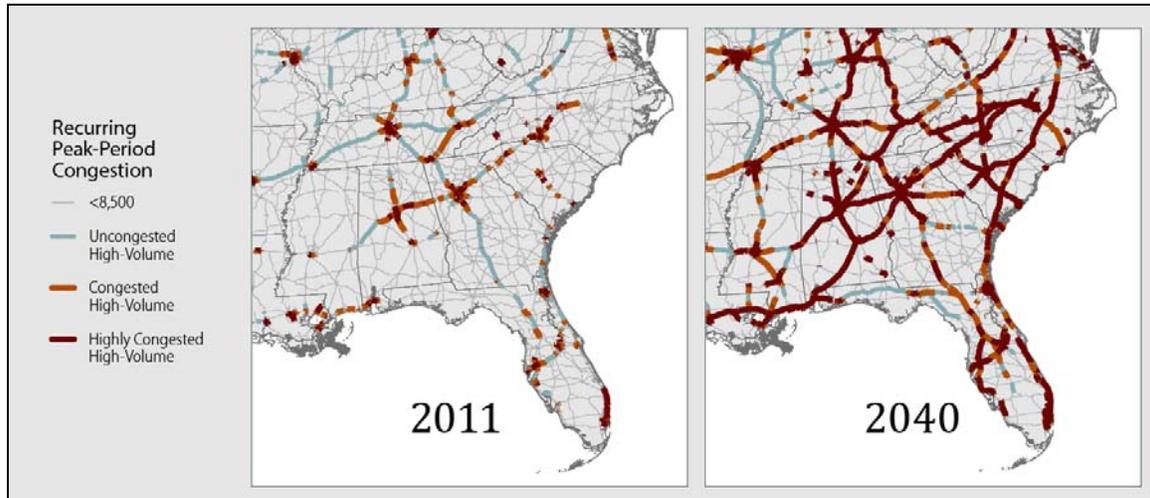
<sup>9</sup> DOT, *Freight Facts and Figures*, 2013 edition, Table 2-1 – Weight of Shipments by Transportation Mode.

<sup>10</sup> “American Transportation Research Institute; Trucking Industry Sees \$9.2 billion in Congestion Costs for 2013,” (continued...)

peak periods and how performance may deteriorate by 2040 without new capacity or operational improvements.

**Figure 1. Peak-Period Congestion on High-Volume Truck Portions of the NHS**

High-volume defined as >8,500 trucks per day



**Source:** CRS modification of figures from U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations.

**Notes:** Trucks include freight-hauling long-distance trucks, freight-hauling local trucks, and other trucks with six or more tires. Highly congested segments have stop-and-go conditions, congested segments have reduced traffic speeds. For further details, see [http://ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/nhsconghvtrk2011.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/nhsconghvtrk2011.htm).

Freight rail congestion has been episodic over the last couple of decades and has been caused by poor weather, demand surges, and railroad mergers. Currently, a boom in movements of crude oil from North Dakota, combined with a bumper harvest in 2014 and a residual backlog of shipments stemming from the severe winter of 2013-2014, is causing delays in rail service in the Upper Midwest. The railroad loading most of North Dakota's rail freight said it would spend \$265 million in the state in 2014 to add parallel track segments.<sup>11</sup> Both Class I railroads serving the state have blamed railroad congestion in Chicago, the crossroads of the North American rail system, as an underlying cause of current service issues (see text box).<sup>12</sup> Local bottlenecks can take months if not years to resolve and may have effects across the entire rail network. Significant increases in train traffic on some lines have prompted upgrades to warning devices at grade crossings or interest in grade separation projects.<sup>13</sup> Railroads seek changes to the environmental permitting process to expedite expansion projects.<sup>14</sup>

(...continued)

*Journal of Transportation*, May 17, 2014, p. 112.

<sup>11</sup> Presentation by BNSF Railroad at STB hearing on U.S. rail service issues, April 10, 2014; [http://www.stb.dot.gov/filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/216e8cd59027290585257cb7006b6068/\\$FILE/235859.pdf](http://www.stb.dot.gov/filings/all.nsf/d6ef3e0bc7fe3c6085256fe1004f61cb/216e8cd59027290585257cb7006b6068/$FILE/235859.pdf).

<sup>12</sup> See testimony of BNSF and Canadian Pacific railroads at STB hearing on U.S. rail service issues, April 10, 2014; [http://www.stb.dot.gov/TransAndStatements.nsf/8740c718e33d774e85256dd500572ae5/a3e019b85169e49285257d27006bc689/\\$FILE/final%20transcript%20for%20April%2010%202014-%20EP-724.pdf](http://www.stb.dot.gov/TransAndStatements.nsf/8740c718e33d774e85256dd500572ae5/a3e019b85169e49285257d27006bc689/$FILE/final%20transcript%20for%20April%2010%202014-%20EP-724.pdf).

<sup>13</sup> Federal funding arrangements for these projects are codified at 23 U.S.C. §130.

<sup>14</sup> <https://www.aar.org/policy/highway-reauthorization?t=environmentalpermitting>.

At land border crossings and seaports, congestion is less a matter of infrastructure constraints than staffing flexibility at customs booths and terminal gates. Truckers would like to see Customs and Border Protection better adjust staffing to accommodate daily peak crossing times at land border points of entry. Port terminal operators seek flexibility from longshoremen to extend truck gate hours to nights and weekends without charging premium rates. Long lines of trucks at some port terminals are also due to the bunching of port calls by steamship operators and their deployment of larger container ships. The prevalence of independent truckers, typically paid by the trip to the port, frustrates coordinated information processing and the truckers' ability to influence the situation. "U.S. port efficiency is among the lowest of world trading partners," according to one U.S. railroad.<sup>15</sup>

West Coast port inefficiencies are of particular concern for two of the nation's most valuable commodities exported in containers to Asia—chilled beef and pork. If more Asia-bound ships call at alternative ports in Canada, Mexico, or on the U.S. Atlantic Coast and reduce calls at U.S. Pacific Coast ports, chilled meat exports cannot easily be diverted to these ports because of their time sensitivity.<sup>16</sup>

## Current Federal Freight-Related Program Elements

### Grant Programs

There is no federal freight transportation program *per se*. Instead, the federal government promotes freight transportation through several programs that are designed to support both passenger and freight mobility.

The most important of these are four of the five "core" programs of the federal-aid highway program, which collectively account for roughly 90% of highway spending authorized by MAP-21 and extension legislation. The four are the National Highway Performance Program (\$22 billion authorized for FY2014); the Surface Transportation Program (\$10 billion); the Highway Safety Improvement Program (\$2.4 billion); and the Congestion Mitigation and Air Quality Program (CMAQ; \$2.2 billion). The fifth core program, the Transportation Alternatives Program (\$0.8 billion), is primarily aimed at supporting nonmotorized transportation.<sup>17</sup> Because highway and bridge improvements benefit both freight and passenger mobility, it is impossible to say how much funding primarily benefits freight movement.

Although there is no discrete freight transportation program, there are certain programs and provisions within programs that specifically pertain to freight projects. For example, under current law, if a project can be demonstrated to make an improvement to the efficient movement of freight, then DOT is authorized to allow a higher federal share of funding. For such projects on

---

<sup>15</sup> Written testimony of Katie Farmer, BNSF Railway Co., Senate Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation and Merchant Marine Infrastructure, Safety, and Security, Hearing on "Keeping Goods Moving," February 10, 2015.

<sup>16</sup> Written testimony of Norman Bessac, Cargill, Senate Committee on Commerce, Science, and Transportation, Subcommittee on Surface Transportation and Merchant Marine Infrastructure, Safety, and Security, Hearing on "Keeping Goods Moving," February 10, 2015.

<sup>17</sup> For more information on these programs, see CRS Report R42762, *Surface Transportation Funding and Programs Under MAP-21: Moving Ahead for Progress in the 21st Century Act (P.L. 112-141)*, coordinated by Robert S. Kirk.

the Interstate Highway System the maximum federal share is 95%, more than the typical 90%, and for non-Interstate projects the maximum share is 90%, more than the typical 80%. Moreover, many types of freight infrastructure improvements are eligible uses of federal highway funds. For example, truck parking and certain surface transportation improvements in and around ports are eligible for Surface Transportation Program funding, and CMAQ funds may be used for advanced truck stop electrification systems if they contribute to attainment of an air quality standard.

In addition to the core programs, MAP-21 also authorized two other small programs that have the potential to benefit freight movement. These are the Railway-Highway Crossings program and the Projects of National and Regional Significance (PNRS) program. The Railway-Highway Crossings Program, authorized at \$220 million in both FY2013 and FY2014, provides funding to reduce hazards at public railway-highway crossings, potentially improving the movement of freight by rail and road.<sup>18</sup> The PNRS program was originally authorized (with all funding earmarked) in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU; P.L. 109-59, Section 1301). It is intended to provide funding for high-cost projects with large nonlocal benefits, including highways, public transportation, rail facilities providing benefits to highway users, and intermodal facilities.<sup>19</sup>

The PNRS program was authorized in MAP-21 for a general fund appropriation of \$500 million in FY2013 only. The appropriations committees, however, did not appropriate these funds. Instead, appropriators have continued to fund the Transportation Investment Generating Economic Recovery (TIGER) program, which provides grants on a competitive basis for a wide range of transportation projects that “will have a significant impact on the nation, a metropolitan area, or a region,”<sup>20</sup> as PNRS also was intended to do. Eligible projects include highways, public transportation, passenger and freight rail transportation projects, and port infrastructure investments. In FY2014, a single grant could be no more than \$200 million, but had to be at least \$10 million (or at least \$1 million for projects in a rural area).

Unlike most of the surface transportation program, funding for the TIGER program comes from the general fund of the U.S. Treasury, not the highway trust fund. Moreover, the program was not enacted as part of surface transportation authorization legislation. Instead, the TIGER program was created as part of the American Recovery and Reinvestment Act of 2009 (P.L. 111-5) and has been funded in six subsequent appropriations bills. Funding was \$1.5 billion in FY2009, \$600 million in FY2010, \$527 million in FY2011, \$500 million in FY2012, \$474 million in FY2013 (after an across-the-board rescission and sequestration), \$600 million in FY2014, and \$500 million in FY2015.

Arguably, the most nationally significant freight project funded by PNRS and TIGER is the Chicago Region Environmental and Transportation Efficiency Program (CREATE, see box).<sup>21</sup> Other examples of freight-related projects supported by the TIGER program include: a \$105 million FY2009 grant for the Crescent Corridor Intermodal Freight Rail Project (Tennessee and

<sup>18</sup> Increases in freight movement can have negative effects on passenger travel. See Government Accountability Office, *Freight Transportation: Developing National Strategy Would Benefit from Added Focus on Community Congestion Impacts*, GAO-14-740, September 2014, <http://www.gao.gov/assets/670/665972.pdf>.

<sup>19</sup> MAP-21 requires DOT to submit a report to Congress with a comprehensive list of projects of national and regional significance based on a survey of state DOTs.

<sup>20</sup> Consolidated Appropriations Act, 2014 (P.L. 113-76; 128 Stat. 574).

<sup>21</sup> CREATE is the acronym for Chicago Region Environmental and Transportation Efficiency Program, see <http://www.createprogram.org/>.

Alabama); a \$98 million FY2009 grant for the National Gateway Freight Rail Corridor (Ohio, Pennsylvania, West Virginia, and Maryland); an \$18.5 million FY2011 grant to the South Jersey Port Corporation for the repair of the DelAir railroad bridge; a \$6.4 million FY2012 grant to the Tulsa Port of Catoosa, OK, to renovate the main dock of one of the largest ports on the inland waterway system; and a \$1.5 million FY2013 grant to the Port of Garibaldi, OR, to rebuild a wharf and to improve port-highway intermodal access.<sup>22</sup>

### The Chicago Rail Bottleneck

Chicago handles about one-third of the nation's rail freight. It is the terminus for four Class I U.S. railroads and a midpoint terminal for the two transcontinental Canadian railroads. The density of rail lines has caused delays at track intersections for freight and passenger trains and delays for motorists at grade crossings. When rail cars are interchanged from one railroad to another in Chicago, it purportedly takes nearly as much time for them to travel across Chicago as it does between Chicago and the east or west coast. In 2003, the City of Chicago, the state of Illinois, the federal government and the railroads reached an agreement to fund 70 separate projects, including 25 grade separation projects and six "flyover" projects (grade separations of two intersecting rail lines), as part of a program called the Chicago Region Environmental and Transportation Efficiency Program (CREATE). Thus far, 22 of these projects have been completed.

Federal funding includes \$100 million authorized by Congress in 2005 by the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, P.L. 109-59, Section 1301), which designated CREATE as one of 25 "nationally and regionally significant" projects across the country (the \$100 million represents 5.6% of total funding authorized for these 25 projects). In the TIGER grant program, DOT has awarded \$110 million for CREATE (a \$100 million grant in FY2009 and a \$10 million grant in FY2012), representing about 2.7% of total TIGER funds awarded and about 14% of total funds awarded through FY2014 to purely rail-related projects. In October 2014, DOT provided \$126 million of High Speed Intercity Passenger Rail funding to construct one flyover to separate commuter trains from freight and Amtrak trains. In addition to federal funding, the state of Illinois has committed to providing \$500 million, the City of Chicago, \$30 million, and the railroads, \$325 million. Combined, these commitments now fund only half the overall program.

In addition to participating in CREATE, railroads have been mitigating Chicago delays by routing trains around the city and moving terminals to the exurbs. Canadian National Railroad (CN) acquired a beltline railroad around downtown Chicago in 2008. This acquisition dramatically increased train traffic traveling through some western suburbs and thus was highly controversial. According to press reports, the other Canadian-owned railway, Canadian Pacific Railroad (CP), proposed a merger with CSX in October 2014, in part to improve CP's transit times through Chicago and its ability to route around the city. No merger was agreed to.

In two STB hearings examining rail delays ostensibly due to crude oil traffic, one of which was held in North Dakota, Chicago congestion was mentioned repeatedly as the underlying cause of poor rail service.<sup>23</sup> Amtrak has assembled a panel of experts to advise how it may address delays in Chicago.<sup>24</sup>

## Financing Initiatives

The federal government supports surface transportation projects mostly through grant-based funding programs like the core highway programs and the TIGER program. Financing initiatives, on the other hand, are arrangements which rely primarily on borrowing. The federal government supports freight infrastructure financing arrangements mainly through direct loans and by means of tax preferences for certain types of bonds.

<sup>22</sup> <http://www.dot.gov/tiger>.

<sup>23</sup> STB, Hearing to Examine U.S. Rail Service Issue, Docket # EP 724, April 10, 2014, and September 4, 2014; <http://www.stb.dot.gov/stb/audiomcc.nsf>.

<sup>24</sup> "Amtrak Establishes Blue Ribbon Panel to Address Chicago Rail Gridlock," Amtrak Press Release ATK-14-097, October 28, 2014.

## TIFIA Program

The Transportation Infrastructure Finance and Innovation Act (TIFIA) program provides loans for highway projects, public or private freight rail facilities providing intermodal transfer, infrastructure providing access to intermodal freight facilities, and surface transportation improvements facilitating intermodal transfers or improved access at port terminals. As of February 23, 2015, according to DOT, TIFIA financing for all types of freight and non-freight projects amounted to \$21.2 billion, with assistance provided to 50 projects costing a total of \$77.1 billion.<sup>25</sup> One of these projects, receiving a \$341 million TIFIA loan, is the Port of Miami Tunnel, which opened August 3, 2014, to improve truck access to and from the port.<sup>26</sup>

MAP-21 greatly enlarged TIFIA by increasing its funding from \$122 million annually to \$750 million in FY2013 and \$1 billion in FY2014. Funding was continued at the level of \$1 billion annualized in the Highway and Transportation Funding Act of 2014. Because the government expects most of the loans to be repaid, the program's funding need only cover the subsidy cost of credit assistance and administrative costs. According to the Federal Credit Reform Act of 1990, Title V of the Omnibus Budget Reconciliation Act of 1990 (P.L. 101-508), the subsidy cost is "the estimated long-term cost to the government of a direct loan or a loan guarantee, calculated on a net present value basis, excluding administrative costs" (Section 502(5)(A)). Consequently, the loan capacity of the TIFIA program is much larger than the budget authority available. A typical rule of thumb is that the average subsidy cost of a loan is 10%, meaning that \$1 million of budget authority can provide \$10 million of loan capacity. DOT estimated that after administrative costs and application of the obligation limitation it would have about \$1.6 billion in total for credit subsidy support in FY2013 and FY2014.<sup>27</sup> Assuming an average subsidy cost of 10%, this provided DOT with the capacity to lend about \$16 billion.

## RRIF Program

The Rail Rehabilitation and Improvement Financing (RRIF) program provides loans and loan guarantees through the Federal Railroad Administration (FRA) up to a total of \$35 billion of unpaid principal, with \$7 billion reserved for Class II and III railroads. Direct loans can be up to 100% of a project's cost and for a maximum term of 35 years. Interest is charged at the U.S. Treasury rate of a similar maturity. Eligible borrowers are state and local governments, government-sponsored authorities and corporations, railroads, joint ventures that include at least one railroad, freight rail shippers served by one railroad wanting to connect a facility to a second railroad, and interstate compacts. Eligible projects include buying or improving rail facilities and equipment, refinancing debt for such purposes, and developing new rail or intermodal facilities; operating expenses are not eligible.

The RRIF does not receive an appropriation from Congress, but allows project sponsors to pay the subsidy cost (termed the "credit risk premium"). FRA evaluates applications for RRIF assistance by eligibility and the ability to repay a loan in terms of the applicant's creditworthiness and the value of collateral offered to secure the loan. These factors determine the credit risk premium.

<sup>25</sup> Department of Transportation, "Projects Financed by TIFIA," <http://www.dot.gov/tifia/projects-financed>.

<sup>26</sup> Department of Transportation, "Project Profiles: Port of Miami Tunnel," <http://www.dot.gov/tifia/financed-projects/port-miami-tunnel>.

<sup>27</sup> Department of Transportation, "TIFIA FAQs," July 2013, <http://www.dot.gov/tifia/faqs>.

Since 2002, there have been 33 loan agreements totaling \$1.7 billion. Loans for freight railroads have ranged in size from \$234 million, made to the Dakota Minnesota and Eastern Railroad in 2004, to \$56,000, made in 2011 to C&J Railroad. Most loans have been made to Class II and Class III freight operators that likely would be unable to obtain loans with comparable interest rates in the private market. Loans are typically relatively small; while the mean size of a loan is \$52 million, the median is \$17 million.

## **State Infrastructure Banks**

Another source of financing for surface transportation projects, including freight projects, is state infrastructure banks (SIBs). Most of these were created in response to a federal-state infrastructure bank program originally established in surface transportation law in 1995 (P.L. 104-59). According to a survey, by 2012, 32 states had established a federally authorized SIB.<sup>28</sup> Although the authority to create a SIB in cooperation with the federal government still exists, MAP-21 failed to extend the authority to capitalize a SIB by using some of a state's apportioned and allocated federal highway and transit funds.

In general, state infrastructure banks have not been very significant participants in financing surface transportation projects. Survey results indicate that between 1995 and 2012 federal and nonfederal SIBs entered into about 1,100 agreements worth a total of \$9 billion, an average of about \$8 million per agreement. About 71% of the projects helped by SIBs were highway projects, which accounted for 88% of the value of all projects supported by SIBs. Water, port, rail, and pipeline projects accounted for about 8% of the loans and 4% of the value of loan agreements. The availability of debt finance from other sources (particularly the municipal bond market) and the commitment of federal monies to traditionally funded projects may explain why SIBs have not had a more significant role in transportation investment.

## **Tax-Preferred Debt Financing**

Debt financing typically involves selling bonds that must be repaid over time, with repayment coming from project revenues, such as tolls, or general government revenues. The federal government supports debt financing in a number of ways. Most importantly, the federal government allows state and local governments to issue bonds for public projects in which the interest paid to investors is exempt from federal tax. A special type of state and local government bond backed by future federal-aid highway grant funding is known as a Grant Anticipation Revenue Vehicle or GARVEE.

In some cases in which there are significant private project benefits, a tax-exempt Private Activity Bond can be issued. The Secretary of Transportation must approve the use of Private Activity Bonds for qualified highway or surface freight transfer facilities and the aggregate amount allocated must not exceed \$15 billion. As of January 14, 2015, \$11.9 billion of the \$15 billion had been allocated. Along with TIFIA, Private Activity Bonds have been important for the creation of

---

<sup>28</sup> Robert Puentes and Jennifer Thompson, "Banking on Infrastructure: Enhancing State Revolving Funds for Transportation," Brookings Institution, September 2012, <http://www.brookings.edu/~media/research/files/papers/2012/9/12%20state%20infrastructure%20investment%20puentes/12%20state%20infrastructure%20investment%20puentes.pdf>.

public private partnerships in infrastructure investment, some of which have sponsored freight-related projects.<sup>29</sup> One such project is a rail-truck transfer hub in Joliet, IL, near Chicago.<sup>30</sup>

The federal government has also authorized tax-credit bonds that provide the investor a federal tax credit or the bond issuer a direct payment. Build America Bonds, authorized by ARRA, were tax credit bonds that could be issued through December 31, 2010, for a wide range of infrastructure projects, including highways and ports. These bonds offered a tax credit equal to 35% of the amount of interest paid by the state or local government issuer or a direct payment to the issuer in an amount equal to 35% of the interest payable to investors. Because of the relatively high subsidy rate, BABs proved very popular. From April 2009 through December 31, 2010, there were 2,275 BAB issues in the total amount of \$181 billion.<sup>31</sup>

## Issues and Options for Congress

### Funding Needs in Freight Infrastructure

The level of funding approved in MAP-21 reauthorization will be a key issue for surface transportation infrastructure generally, and freight infrastructure specifically. The federal share of highway capital spending since 2000 has typically been in the 40% to 45% range. In 2010, the most recent year for which comprehensive data are available, capital spending on highways by all levels of government was about \$100 billion, of which about \$44 billion (44%) was provided by the federal government. Of the federal share, \$11.9 billion was provided by ARRA.<sup>32</sup>

FHWA estimates that to maintain the existing condition and performance of the highway system from 2011 through 2030 would require annual expenditure of between \$65.3 and \$86.3 billion (2010 dollars), depending on the rate of growth in vehicle miles traveled (VMT). This is between 14% and 35% less than was spent in 2010, although these differences drop to 2% and 26% if ARRA spending is excluded. To improve the condition and performance of the highway systems by implementing all cost-beneficial investments would require spending, FHWA estimates, between \$123.7 and \$145.9 billion annually (2010 dollars). An intermediate improvement scenario, assuming the implementation of investments with a cost-benefit ratio of at least 1.5, would require spending between \$93.9 and \$111.9 billion annually (in 2010 dollars).<sup>33</sup>

---

<sup>29</sup> CRS Report R43410, *Highway and Public Transportation Infrastructure Provision Using Public-Private Partnerships (P3s)*, by William J. Mallett.

<sup>30</sup> <http://www.centerpoint-intermodal.com/overview.html>. Most other Private Activity Bond projects are highway related, see [http://www.fhwa.dot.gov/ipd/finance/tools\\_programs/federal\\_debt\\_financing/private\\_activity\\_bonds/](http://www.fhwa.dot.gov/ipd/finance/tools_programs/federal_debt_financing/private_activity_bonds/).

<sup>31</sup> U.S. Treasury, *Treasury Analysis of Build America Bonds Issuance and Savings*, May 16, 2011, <http://www.treasury.gov/initiatives/recovery/Documents/BABs%20Report.pdf>.

<sup>32</sup> Department of Transportation, *2013 Status of the Nation's Highways, Bridges, and Transit: Conditions and Performance*, p. es-1, exhibits 6-6 and 6-8, <http://www.fhwa.dot.gov/policy/2013cpr>. About every two years, at Congress's direction, FHWA assesses the condition and performance of the nation's highways and bridges, documents current spending by all levels of government, and estimates future spending needs to maintain or improve current conditions and performance.

<sup>33</sup> Conditions and Performance, Chapter 8. For further information on highway funding needs, see CRS Report R43420, *Surface Transportation Program Reauthorization Issues for Congress*, by Robert S. Kirk et al.

There is currently no public analysis of the conditions and performance of the national freight network. MAP-21 requires DOT to publish one every two years beginning in 2014. According to DOT, the first freight conditions and performance report will be released in the spring of 2015.

Based on this type of research, freight transportation interest groups typically point to a gap between current and future infrastructure needs and current spending levels, a gap they believe will affect the country's economic competitiveness. For example, the National Association of Manufacturers argues that "the United States is stuck in a decade-long period of decline in overall infrastructure capital spending that will eventually harm job creation, future productivity and global competitiveness."<sup>34</sup> To make up for this they argue "a more focused and results-driven effort that expands and sustains higher levels of investment from all public and private infrastructure sources would have positive short- and long-term economic returns."<sup>35</sup> Stakeholder groups frequently raise the uncertainty of federal funding for freight projects as a concern.<sup>36</sup>

The view that there should be much greater government spending, particularly by the federal government, is not unanimous. Some of those appointed to a congressionally mandated commission looking at surface transportation issues argued that the extent of underfunding is exaggerated. The dissenters, including then-U.S. Secretary of Transportation Mary Peters, argued that "a failure to properly align supply and demand, not a failure to generate sufficient tax revenues, is the essential policy failure" in transportation infrastructure provision.<sup>37</sup> A key ingredient of change, in their view, should be market-based reforms of highway systems allowing for much greater reliance on pricing (such as tolling rates that fluctuate with demand) and private sector participation. Moreover, they argue that the federal role ought to be reduced and refocused in order to allow innovation at the state and local level.

## Truck Size and Weight

Integrally related to the cost and performance of highway infrastructure is the weight of vehicles allowed to travel on them. Federal truck weight limits apply only to Interstate highways. Federal truck size regulations apply to the National Truck Network as indicated above. No major changes to truck size and weight provisions were included in MAP-21, but a new study and compilation of current state laws was required.<sup>38</sup> The DOT study, expected to be issued in 2015, is going to evaluate several heavier or larger truck configurations. Among these are increasing the weight limit on five-axle trucks (commonly known as "18-wheelers") from 80,000 to 88,000 lbs., adding a sixth-axle and increasing allowable weight to either 91,000 lbs. or 97,000 lbs., and increasing the length of double 28-foot trailers ("pup" trailers) pulled by a single truck to 33 feet each.<sup>39</sup>

<sup>34</sup> National Association of Manufacturers, *Catching Up: Greater Focus Needed to Achieve a More Competitive Infrastructure, Executive Overview*, September 2014, <http://www.nam.org/Issues/Infrastructure/Surface-Infrastructure/Infrastructure-Report-2014-Executive-Summary.pdf>.

<sup>35</sup> National Association of Manufacturers, *Catching Up: Greater Focus Needed to Achieve a More Competitive Infrastructure, Full Report*, September 2014, p. 7, <http://www.nam.org/Issues/Infrastructure/Surface-Infrastructure/Infrastructure-Full-Report-2014.pdf>.

<sup>36</sup> Freight Stakeholders Coalition, "Surface Transportation Reauthorization Platform-2014," <https://www.intermodal.org/assets/private/2014freightstakeholderscoalitionplatform.pdf>.

<sup>37</sup> National Surface Transportation Policy and Revenue Study Commission, *Transportation for Tomorrow: Volume I*, December 2007, pp. 59-68, [http://transportationfortomorrow.com/final\\_report/](http://transportationfortomorrow.com/final_report/).

<sup>38</sup> 23 C.F.R. §658.

<sup>39</sup> For further information on the study, see <http://ops.fhwa.dot.gov/freight/sw/map21tswstudy/index.htm>.

Large trucking firms generally support either weight or size increases (depending on the type of freight they carry) while smaller trucking firms (with less financial means to reconfigure their equipment), railroads, and highway safety groups have generally opposed both changes.

## Setting Priorities

While the level of infrastructure spending is important, the way in which priorities are set is also important.<sup>40</sup> One frequent claim is that freight projects do poorly in the public planning processes of state departments of transportation and metropolitan planning organizations, the government entities that are largely responsible for deciding which public projects get built, because the general public values improvements to passenger travel more highly than improvement of freight movements. Planners in the public sector also can be uncomfortable advocating for projects with direct benefits to the private sector.<sup>41</sup> Additionally, as the National Freight Advisory Committee claimed recently, freight projects may lose out “because their benefits spread nationally or regionally, beyond the boundaries of the funding entity.”<sup>42</sup>

Addressing major freight bottlenecks with federal grants could be difficult politically because it would entail allocating large sums to relatively few, narrowly defined geographic areas. For example, according to the American Trucking Associations, just 5% of the U.S. road system carries 75% of the nation’s truck traffic.<sup>43</sup> Moreover, about 85% of the volume of containerized imports and exports is handled by 10 ports.<sup>44</sup> In some cases, local planners may not fully appreciate that the competitiveness of local producers or manufacturers is most negatively affected by an infrastructure constraint outside their jurisdiction.

A competitive discretionary program theoretically could fund the most valuable projects. One model of such a program is the federal New Starts program, which funds public transportation construction projects through a competitive process intended to direct significant funding to the best projects. However, this is done at considerable time and cost in developing and evaluating projects.<sup>45</sup> Another discretionary program, the TIGER program, evaluates and funds projects much more quickly, but it has been criticized for accepting applications after the deadline, advancing low-scoring projects, and changing the evaluation of lower rated projects to “highly recommended” after they were chosen for funding. A 2014 GAO study noted that “an absence of

---

<sup>40</sup> International Monetary Fund, “Chapter 3: Is It Time for an Infrastructure Push? The Macroeconomic Effects of Public Investment,” in *World Economic Outlook, October 2014: Legacies, Clouds, Uncertainties*, <http://www.imf.org/external/pubs/ft/weo/2014/02/pdf/text.pdf>.

<sup>41</sup> Government Accountability Office, *Freight Transportation: Developing National Strategy Would Benefit from Added Focus on Community Congestion Impacts*, September 2014, GAO-14-740, pp. 41-42, <http://www.gao.gov/assets/670/665972.pdf>.

<sup>42</sup> National Freight Advisory Committee, *Recommendations to U.S. Department of Transportation for the Development of the National Freight Strategic Plan*, June 12, 2014, p. 8, <http://www.dot.gov/sites/dot.gov/files/docs/NFAC%20Task%201-Recommendations%20for%20NFSP-Final%286-12-14%29.pdf>.

<sup>43</sup> ATA, *Transport Topics*, December 8, 2008, p. 28.

<sup>44</sup> Research and Innovative Technology Administration, Bureau of Transportation Statistics, *America’s Container Ports: Linking Markets at Home and Abroad*, January 2011, table 3, [https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/americas\\_container\\_ports/2011/pdf/entire.pdf](https://www.rita.dot.gov/bts/sites/rita.dot.gov/bts/files/publications/americas_container_ports/2011/pdf/entire.pdf).

<sup>45</sup> Bipartisan Policy Center, *New Starts: Lessons Learned for Discretionary Federal Transportation Funding Programs*, January 25, 2010, <http://bipartisanpolicy.org/sites/default/files/New%20Starts%20Paper%20Jan%202010.pdf>.

documentation of such decisions can give rise to challenges to the integrity of the evaluation process and the rationale for the decisions made.”<sup>46</sup>

An alternative way of setting priorities would be for Congress to create a program that distributes funds for freight projects by formula. The formula could give weight to whichever factors Congress considers most important. Spending eligibilities could be written to narrowly circumscribe project selection by state departments of transportation and metropolitan planning organizations (MPOs). Historically, however, funding formulas for federal surface transportation projects have distributed funding widely and allowed these funds to be used on a broad array of projects at the discretion of states and localities. Consequently, formula programs have not been well suited to funding large projects that might have the biggest national and regional benefits.

The important role of multi-modal transportation in freight movement creates a particular challenge in setting spending priorities. Federal programs are typically focused on a single mode, making it difficult to support multi-modal projects, which are common in freight infrastructure. Eligibility rules also have tended to exclude local roads (known as intermodal connectors) that provide access between freight facilities, such as ports, airports, and rail terminals, and the main highway system. A further barrier to a multi-modal freight program could be the source of funds. If funding is provided only from taxes paid by highway users, there may be objection to expenditures that benefit entities such as railroads and water carriers that have not paid the taxes. Funding a freight program with user fees, rather than taxes paid only by highway users might address such objections.

## Freight Planning and Performance Management

The federal government can also influence project prioritization through the planning processes of state departments of transportation and MPOs. MAP-21 made several changes to federal planning requirements in the area of freight, including provisions related to performance management. Among other things, MAP-21 required DOT to identify no more than 30,000 centerline miles of highway segments most critical to freight transport (a “Primary Freight Network,” or PFN), the purpose being to assist states in prioritizing resources. DOT has issued for comment a draft PFN.<sup>47</sup> DOT has indicated that the arbitrary mileage restriction for the PFN may limit its usefulness, and there have been suggestions that the mileage limit be lifted or abolished all together. MAP-21 also directed DOT to encourage each state to establish a freight advisory committee including industry representatives to develop a state freight plan. DOT is required to publish a national freight strategic plan by October 1, 2015.

MAP-21 also required states to incorporate a performance-based approach to transportation planning in support of national goals.<sup>48</sup> Performance targets are to be set by each state in

<sup>46</sup> Government Accountability Office, *Surface Transportation: Actions Needed to Improve Documentation of Key Decisions in the TIGER Discretionary Grant Program*, May 28, 2014, <http://www.gao.gov/assets/670/663630.pdf>.

<sup>47</sup> <http://www.ops.fhwa.dot.gov/freight/infrastructure/pfn/index.htm>.

<sup>48</sup> Seven national goals were identified in MAP-21: “(1) to invest in infrastructure improvements and to implement operational improvements that (A) strengthen the contribution of the national freight network to the economic competitiveness of the United States; (B) reduce congestion; and (C) increase productivity, particularly for domestic industries and businesses that create high-value jobs; (2) to improve the safety, security, and resilience of freight transportation; (3) to improve the state of good repair of the national freight network; (4) to use advanced technology to improve the safety and efficiency of the national freight network; (5) to incorporate concepts of performance, innovation, competition, and accountability into the operation and maintenance of the national freight network; and (6) (continued...) ”

coordination with MPOs. In its statewide plan, each state must include an evaluation of progress toward achieving its performance targets. Also required in each state's transportation improvement program is a description of how its investment priorities will help achieve the stated performance targets.

Many of MAP-21's freight provisions have yet to be fully implemented; thus it is too soon to know if they will have a positive effect on the freight transportation system. However, freight planning and performance measures are placing greater emphasis on data collection (see Freight Data Needs).

### Freight Data Needs

Many state and city transportation planners seek more robust information on freight shipments through their districts. To evaluate potential solutions for the trucking bottlenecks identified in the **Appendix**, for instance, it would be helpful for transportation planners to know the characteristics of the trucks traveling that highway segment. Are they local trucks or through trucks? What industries are they serving? Is there a large daily or seasonal variation in the volume? Answers to these questions could help planners identify those that share an economic interest in mitigating the bottleneck or the feasibility of moving some of the traffic to off-peak hours and to other modes.

The Bureau of Transportation Statistics and the Census Bureau conduct a survey of shippers every five years (the Commodity Flow Survey cited in Table 1) that provides information on outbound shipments. However, the sample size is not sufficient to provide reliable data for any specific urban area; the survey does not record through traffic or imports; and it occurs too infrequently to identify trends in freight patterns. The survey was designed more to provide a national picture of freight transport than to meet local or regional needs. In MAP-21 (Sec. 1115(h)(1)(C) of P.L. 112-141), Congress requested DOT to "...consider any improvements to existing freight flow data collection efforts that could reduce identified freight data gaps and deficiencies..." A policy decision for Congress is whether the federal government should be responsible for providing adequate freight data for state and local transportation planners.

## Funding and Financing Options

The revenues flowing into the highway trust fund that provide the bulk of the money for the existing highway and transit programs are insufficient to maintain the current level of spending. Greater federal funding for freight transportation infrastructure would require either reducing funding for other programs or generating new revenues. The main options in reauthorization to generate more funding for freight infrastructure would be to raise the federal fuels tax, to institute other freight-specific user fees, or to develop alternative financing mechanisms such as a National Infrastructure Bank and public-private partnerships (P3s). Another option might be to regularly fund highway programs with general funds.

Advantages of raising the federal fuels tax in the short-to-medium term include the relatively large sums of money it generates, its low costs to change and administer, and its positive effects on economic efficiency.<sup>49</sup> A one-cent-per-gallon increase in the fuels tax generates about \$1.5 billion per year for the highway trust fund. A number of interest groups, including the American Trucking Associations and the Truckload Carriers Association, have expressed a willingness to

(...continued)

to improve the economic efficiency of the national freight network; (7) to reduce the environmental impacts of freight movement on the national freight network." (23 U.S.C. §167).

<sup>49</sup> As CBO notes, "economic efficiency is promoted when users of highway infrastructure are charged according to the marginal (or incremental) costs of their use, including the "external costs" that are imposed on society." External costs include environmental pollution, congestion, noise, and accidents. Congressional Budget Office, *Options for Reducing the Deficit: 2014 to 2023*, November 13, 2013, <http://www.cbo.gov/budget-options/2013/44853>.

support an increase in the federal fuels tax to fund surface transportation infrastructure investment.<sup>50</sup> A study conducted by FHWA in 2000 concluded that federal motor fuel tax rates provided heavier freight trucks a cross-subsidy from lighter freight trucks and automobiles.<sup>51</sup> But opposition to raising the fuels tax is widespread, and the Obama Administration has stated it does not support raising the fuels tax.<sup>52</sup>

Greater use of tolling could fund investment to relieve freight bottlenecks, such as road widening, bridge replacements, truck-only lanes, and new highways.<sup>53</sup> Although the decisions to implement facility-specific charges and the institutional arrangements needed to support them are taken at the state and local level, there are some ways Congress might encourage such projects. For example, federal restrictions on highway tolls could be lessened or eliminated.<sup>54</sup>

Trucking groups have been particularly wary of proposals to fund highway construction through tolls, as they worry that toll rates could shift some costs from passenger vehicles to trucks. There is also concern that toll revenue may be diverted to uses other than the toll facility. Tolls could divert some trucks to toll-free highways that are less safe for large trucks. Some toll roads have mitigated the effects of tolls on road usage by allowing trucks to haul larger loads than on non-tolled facilities.<sup>55</sup>

New sources of revenue to provide money for freight infrastructure might include shipping container fees, customs revenue, a bill of lading fee, and a weight/distance tax. Some of these fees, though, would be expensive to collect, and others would generate relatively modest sums. For example, it would take a \$1,650 annual truck registration fee to generate the same amount as a 10-cent increase in the fuels tax, roughly \$15 billion annually.<sup>56</sup>

Proposals for new funding sometimes include the creation of a new trust fund or a new account in the highway trust fund.<sup>57</sup> A freight transportation trust fund or freight transportation account could ensure that the revenues generated from freight-related uses are dedicated to freight-related

---

<sup>50</sup> Statement of Derek J. Leathers, President and Chief Operating Officer, Werner Enterprises on behalf of the American Trucking Associations, House Committee on Transportation and Infrastructure, Panel on 21st Century Freight Transportation, April 24, 2013, <http://transportation.house.gov/uploadedfiles/documents/2013-04-24-leathers.pdf>; Truckload Carrier Association, “+Highway Taxes,” <http://www.truckload.org/Highway-Taxes>.

<sup>51</sup> The study examined the shares of federal revenues contributed by various vehicle classes compared with the costs to highway agencies for providing highway infrastructure using federal funds. This study did not consider the wider economic costs and benefits that highway use may deliver such as air pollution and economic growth. See, Federal Highway Administration, *Addendum to the 1997 Federal Highway Cost Allocation Study, Final Report*, May 2000, <http://www.fhwa.dot.gov/policy/hcas/addendum.htm>.

<sup>52</sup> Christopher Conkey, “Raising the Federal Gas Tax is a No-Go,” *Wall Street Journal*, March 4, 2009, p. A2.

<sup>53</sup> Cambridge Systematics, *Truck-Only Toll Lanes*, Report Prepared for Oregon Department of Transportation, February 2009, <http://www.oregon.gov/ODOT/TD/TP/docs/tolling/whitepaper7.pdf>.

<sup>54</sup> Transportation Research Board, *Funding Options for Freight Transportation Projects*, Special Report 297, 2009, p. 275, <http://onlinepubs.trb.org/onlinepubs/sr/sr297.pdf>.

<sup>55</sup> For example, the New York Thruway, Indiana Toll Road, and the Massachusetts, Ohio, and Florida Turnpikes all permit trucks to pull double full-size trailers, which generally are not allowed on other roads in those states.

<sup>56</sup> CRS Report R42877, *Funding and Financing Highways and Public Transportation*, by Robert S. Kirk and William J. Mallett.

<sup>57</sup> See, for example, Testimony of Mortimer Downey, Chairman, Coalition for America’s Gateways and Trade Corridors, in U.S. Congress, Senate Committee on Environment and Public Works, *Hearing on Goods Movement on Our Nation’s Highways*, May 8, 2008, [http://www.tradecorridors.org/images/Testimony\\_for\\_EPW\\_Hearing\\_on\\_Freight.5.8.08.pdf](http://www.tradecorridors.org/images/Testimony_for_EPW_Hearing_on_Freight.5.8.08.pdf).

improvement projects. Alternative approaches have involved creating a national infrastructure bank to provide low-cost, long-term loans on flexible terms for use on various types of projects, including freight projects,<sup>58</sup> and providing greater subsidies to borrowers under the existing Railroad Rehabilitation and Infrastructure Finance program to encourage greater borrowing by freight railroads.

Prior to January 1, 2015, Class II and Class III (or “short line”) railroads were able to receive a tax credit, known as the “45G tax credit, for track maintenance” (26 U.S.C. §45G). H.R. 721, introduced in the 114<sup>th</sup> Congress, would extend this tax credit to the end of 2016. Tax credits for Class I freight railroads have also been proposed in the past (H.R. 1806, 111<sup>th</sup> Congress). The credits are intended to support private investment in freight railroads without involving the government in deciding when and where that investment should take place. Since the heaviest trucks and railroads, particularly shortline railroads, often compete for the same freight, Congress may consider whether raising truck-related taxes that fund the Highway Trust Fund could be an appropriate method for encouraging rail investment.

## Recent Legislative Proposals

Several legislative proposals with significant freight provisions have been introduced in the 113<sup>th</sup> and 114<sup>th</sup> Congresses.

### 113<sup>th</sup> Congress

The MAP-21 Reauthorization Act (S. 2322, 113<sup>th</sup> Congress), reported out of the Senate Environment and Public Works Committee on May 15, 2014, would have created a new freight formula program, the National Freight Program (NFP). Funding for the NFP was set at \$6 billion over the six years of the bill, starting with \$400 million in FY2015 and increasing to \$2 billion in FY2020. The bill also required the designation of a national highway freight network (NHFN) and, as a part of this, a primary highway freight network (PHFN). NFP funding was to be used only for projects on the NHFN, with a minimum percentage designated to projects on the PHFN.<sup>59</sup> To be able to spend funds from the NFP, a state would have been required to create a state freight advisory committee and a state freight plan.

The other legislative proposal was from the Obama Administration. Its bill, the Generating Renewal, Opportunity, and Work with Accelerated Mobility, Efficiency, and Rebuilding of Infrastructure and Communities throughout (GROW) America Act, was introduced by request in June 2014 (H.R. 4834, 113<sup>th</sup> Congress). The act proposed to create two new grant programs for investments targeted to freight infrastructure, the Multimodal Freight Incentive Program and the National Freight Infrastructure Program. Together these programs were to be authorized at \$10 billion over four years, with funding coming from the highway account of the transportation trust fund.<sup>60</sup> Note: The President’s FY2016 budget request includes the outline of a six-year GROW America Act that appears to be similar to its earlier proposal but with two extra years. The two

---

<sup>58</sup> For more information, see CRS Report R43308, *Infrastructure Banks and Debt Finance to Support Surface Transportation Investment*, by William J. Mallett and Steven Maguire.

<sup>59</sup> This minimum percentage depends on the mileage of Interstate highways in the state not in the PHFN.

<sup>60</sup> The GROW America Act renames the highway trust fund the transportation trust fund and creates, in addition to the highway and mass transit accounts, a rail account and a multi-modal account.

new freight programs that would be authorized at \$4 billion in year four of H.R. 4834 would continue at that level in years five and six of the new proposal. No other details are available.<sup>61</sup>

The Multimodal Freight Incentive Program, a formula program, was proposed in H.R. 4834 to fund highways, rail, landside port infrastructure, airport, and intermodal projects to improve freight movement. Funding was proposed to be \$500 million in FY2015, \$1 billion in FY2016, \$1.5 billion in FY2017, and \$2 billion in FY2018. The National Freight Infrastructure Program, a discretionary grant program in H.R. 4834, was proposed to fund projects improving freight movement on highways, railroads, aircraft, waterways, or pipelines, as well as intermodal projects, and projects at international border crossings. Funding was proposed at \$500 million in FY2015, \$1 billion in FY2016, \$1.5 billion in FY2017, and \$2 billion in FY2018.

H.R. 4834 would have required states that receive funding through the National Freight Infrastructure Program to establish state freight advisory committees and state freight plans. At the national level, the proposal required DOT to develop a national freight strategic plan and to “develop new tools and improve existing tools to support an outcome-oriented, performance-based approach to evaluate proposed freight-related and other transportation projects.”

## **114<sup>th</sup> Congress**

H.R. 935 (114<sup>th</sup> Congress) proposes to create a national freight network trust fund. Revenues to the trust fund would be 5% of the import duties collected by Customs and Border Patrol. Import duties that go to the general fund of the U.S. Treasury were approximately \$32 billion in FY2014, 5% of which amounts to about \$1.6 billion.<sup>62</sup> H.R. 935 would use the trust fund to finance the National Freight Network Grant Program, a discretionary program that would fund a wide range of freight infrastructure projects. Another proposal for funding freight projects is a 1% tax on the amount paid for truck or rail shipments (H.R. 1308, 114<sup>th</sup> Congress).

H.R. 749, as reported by the House Transportation and Infrastructure Committee in the 114<sup>th</sup> Congress, seeks to expedite the permitting process for freight rail infrastructure projects.

---

<sup>61</sup> Department of Transportation, Budget Highlights, Fiscal Year 2016, p. 4, <http://www.dot.gov/sites/dot.gov/files/docs/FY2016-DOT-BudgetHighlights-508.pdf>.

<sup>62</sup> Office of Management and Budget, *The President's Fiscal Year 2016 Budget: Analytical Perspectives*, Table 12-5, [http://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/ap\\_12\\_receipts.pdf](http://www.whitehouse.gov/sites/default/files/omb/budget/fy2016/assets/ap_12_receipts.pdf).

## Appendix. Congested Freight-Significant Highway Segments (2012)

**Table A-1. Most Congested Freight-Significant Highway Locations: 2012**

Location	Congestion Ranking	Average Speed (mph)	Peak Period Average Speed (mph)	Non-Peak Period Average Speed (mph)	Non-Peak/Peak Ratio
Chicago, IL: I-290 at I-90/I-94	1	30.13	22.82	32.89	1.44
Houston, TX: I-610 @ US 290	2	41.99	34.10	45.70	1.34
Austin, TX: I-35	3	35.79	23.12	42.56	1.84
Fort Lee, NJ: I-95 at SR-4	4	28.98	22.67	31.84	1.40
St. Louis, MO: I-70 at I-64 (West)	5	41.62	38.45	42.88	1.12
Louisville, KY: I-65 at I-64/I-71	6	44.93	39.34	47.35	1.20
Houston, TX: I-45 at US-59	7	38.55	30.19	42.49	1.41
Cincinnati, OH: I-71 @ I-75	8	48.12	41.59	50.58	1.22
Houston, TX: I-10 @ I-45	9	45.63	36.21	50.02	1.38
Dallas, TX: I-45 at I-30	10	42.44	34.37	45.71	1.33
Houston, TX: I-10 @ US 59	11	46.65	35.77	52.26	1.46
Chicago, IL: I-90 at I-94 (North)	12	35.39	22.64	40.99	1.81
Denver, CO: I-70 @ I-25	13	44.10	37.65	47.04	1.25
Atlanta, GA: I-285 at I-85 (North)	14	45.69	34.87	50.94	1.46
Los Angeles, CA: SR-60 at SR-57	15	46.43	39.01	49.30	1.26
Houston, TX: I-45 @ I-610 north	16	47.51	38.21	51.99	1.36
Minneapolis - St. Paul, MN: I-35W at I-494	17	44.80	35.01	49.74	1.42
Hartford, CT: I-84 at I-91	18	47.52	38.25	51.37	1.34
Nashville, TN: I-24 @ I-440N Interchange	19	49.17	41.61	52.58	1.26
Brooklyn, NY: I-278 at Belt Parkway	20	39.81	34.18	41.78	1.22
Houston, TX: I-10 @ I-610 west	21	49.69	42.28	52.86	1.25
Indianapolis, IN: I-65 @ I-70 North	22	51.64	48.26	52.93	1.10
Ft. Worth, TX: I-35W at I-30	23	47.64	40.26	50.78	1.26
Atlanta, GA: I-75 at I-285 (North)	24	48.75	38.99	53.30	1.37
Chicago, IL: I-90 at I-94 (South)	25	48.44	41.38	50.78	1.23

**Source:** U.S. DOT, *Freight Facts and Figures 2013*, Table 3-14, p. 46; [http://ops.fhwa.dot.gov/freight/freight\\_analysis/nat\\_freight\\_stats/docs/13factsfigures/table3\\_14.htm](http://ops.fhwa.dot.gov/freight/freight_analysis/nat_freight_stats/docs/13factsfigures/table3_14.htm).

**Notes:** The congestion ranking is based on FHWA's freight congestion index which factors in the number of trucks using a particular highway segment and the impact that congestion has on average truck speed.

## **Author Contact Information**

John Frittelli  
Specialist in Transportation Policy  
jfrittelli@crs.loc.gov, 7-7033

William J. Mallett  
Specialist in Transportation Policy  
wmallett@crs.loc.gov, 7-2216