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# OVERVIEW OF THE UNITED STATES FREIGHT TRANSPORTATION SYSTEM

**(113–13)**

## HEARING

BEFORE THE

PANEL ON
21st-CENTURY FREIGHT TRANSPORTATION

OF THE

COMMITTEE ON
TRANSPORTATION AND
INFRASTRUCTURE
HOUSE OF REPRESENTATIVES

ONE HUNDRED THIRTEENTH CONGRESS

FIRST SESSION

APRIL 24, 2013

Printed for the use of the
Committee on Transportation and Infrastructure

Available online at: http://www.gpo.gov/fdsys/browse/committee.action?chamber=house&committee=transportation

U.S. GOVERNMENT PRINTING OFFICE

80–577 PDF WASHINGTON : 2013

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
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**Committee on Transportation and Infrastructure**
**U.S. House of Representatives**

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Chairman

Washington, DC 20515

Nick J. Rahall, II
Ranking Member

Christopher P. Bertram, Staff Director

April 19, 2013

James H. Zoia, Democrat Staff Director

**SUMMARY OF SUBJECT MATTER**

| | |
|---|---|
| TO: | Members, Panel on 21st Century Freight Transportation |
| FROM: | Staff, Panel on 21st Century Freight Transportation |
| RE: | Panel Hearing on "Overview of the United States' Freight Transportation System" |

## PURPOSE

The Panel on 21st Century Freight Transportation will meet on Wednesday, April 24, 2013, at 10:00 a.m., in 2167 Rayburn House Office Building to receive testimony related to the importance of freight transportation to the U.S. economy. At this hearing, the Panel will receive testimony on the current operation of the freight network, what challenges impact its performance, and what can be done to improve the efficiency and safety of freight transportation. The Committee will hear from Fred Smith, Chairman, President, and CEO of FedEx Corporation; Wick Moorman, Chairman, President, and CEO of Norfolk Southern Corporation; James Newsome, President and CEO of the South Carolina Ports Authority; Derek Leathers, President of Werner Enterprises; and Edward Wytkind, President, Transportation Trades Department, of the AFL-CIO.

## BACKGROUND

The safe and efficient movement of freight throughout the United States impacts the day-to-day lives of every American. From the clothes you wear to the car you drive to the food you eat, the freight transportation system impacts all aspects of everyday life. In 2011, the U.S. transportation system moved 17.6 billion tons of goods, valued at over $18.8 trillion.[1] The Federal Highway Administration estimates that in the next 30 years, there will be 60 percent more freight that must be moved across the Nation. To keep up with such demand, it is critical that Congress seek ways to increase the efficiency, safety, and overall condition and performance of the Nation's freight network.

In the past, the conversation about freight transportation and goods movement has focused on specific modes of transportation. However, given the multi-modal nature of freight

[1] Statistics used in this memorandum are taken from the Bureau of Transportation Statistics, the Pipeline and Hazardous Materials Safety Administration, the Army Corps of Engineers, the Federal Aviation Administration, the Federal Highway Administration, the Congressional Research Service, the Association of American Railroads, the World Shipping Council, and the American Society of Civil Engineers.

movement, it is important to examine the system as a whole. Goods frequently move back and forth between ocean vessels, highways, railroads, air carriers, inland waterways, ports, and pipelines. Bottlenecks arising at any point on the system can seriously impede freight mobility and drive up the cost of the goods impacted. For this reason, improving the efficient and safe flow of freight across all modes of transportation is critical to the health of the United States economy and the future of the Nation's global competitiveness.

## INTERMODAL GOODS MOVEMENT

In his testimony before the Senate Committee on Commerce, Science, and Transportation on June 18, 2009, Rick Garbielson of the Target Corporation provided a telling example that demonstrates the intermodal nature of goods movement.[2] Before arriving on the shelves at Target, a tee-shirt begins its journey at an overseas factory. It is then loaded into a container and moved by truck to a port, where it is placed on an ocean vessel. The ship carries the shirt across the ocean to a domestic port, where it is unloaded and processed through a sorting facility, combining the shirt with similar items arriving from a number of other foreign points of origin.

These items are then loaded onto trucks or trains and delivered to a distribution facility, at which point the shirt is combined with other items designated for the same destination. These items are then transported via truck or train, depending on the distance between the distribution facility and the destination. If a customer wants a product shipped directly to their residence or business, Target may utilize cargo aircraft to transport the goods, in addition to trucks, trains, and vessels. Due to the complexity of the supply chain, even the smallest delay at any point can cause massive ripples throughout the system, resulting in significant economic loss.

### Highways

The Nation's highway system is an essential part of the freight network. Not every community has a railroad, airport, waterway, or port nearby, but people live, work, and shop along the Nation's four million miles of highways and roads. As a result, a consumer good is often transported on the highway system for at least part of its journey.

Approximately 50 percent of all freight moved in the United States travels less than 100 miles between origin and destination. At this distance, trucks carry almost 85 percent of all of the freight that is moved. More than 250 million trucks carry freight on the highway system each year, and commercial trucking requires a reliable highway system on which to operate. However, each day approximately 12,000 miles of the highway system slows below posted speed limits and an additional 7,000 miles experiences stop-and-go conditions. Such congestion negatively impacts the efficiency of the highway system as a reliable mode of transportation.

### Railroads

Railroads carry more freight than any other mode of surface transportation over long distances. There are approximately 565 freight railroads in the country employing nearly 180,000

[2] *Freight Transportation in America: Options for Improving the Nation's Network Before the S. Comm. on Commerce, Science, and Transp.*, 111th Cong. 1 (2009) (statement of Rick Gabrielson, Dir. of Int'l Transp., Target).

workers. Freight rail carries 43 percent of intercity freight, and for every rail job, 4.5 other jobs are supported elsewhere in the economy.

These privately owned companies operate on more than 200,000 miles of throughout the Nation. Freight railroads are divided into three groups, called classes, based upon their annual revenues. While Class I railroads generally provide long-haul freight services, the Class II and III railroads often provide the first and last mile of rail freight movements. In 2012, the freight railroads spent more than $13.8 billion in capital to improve and expand their networks.

Air Cargo

Air cargo carriers play a vital role in transporting goods both in domestic and international supply chains. Air carriers can move cargo quickly and often move goods of particularly high value. Furthermore, in some areas of the country, air freight is the only reliable means of delivering goods. Air cargo is transported both in the bellies of passenger aircraft as well as in dedicated all-cargo aircraft on scheduled and nonscheduled service. Currently, there are 33 all-cargo carriers operating 840 cargo aircraft. In 2012, air cargo carriers flew over 36 billion revenue ton miles (RTMs).[3] Of these 36 billion RTMs, all-cargo carriers comprised almost 80 percent of the total, with passenger carriers flying the remainder.

Shipping

Cargo ships move massive amounts of goods around the world every year. Over 75 percent of all United States international freight moves by water. The United States is the world's largest importer of containerized goods and the world's second-largest exporter of such cargo. For the Nation to continue importing and exporting such a large volume of goods, port infrastructure and land-side connections are necessary to ensure that cargo can be efficiently transferred from ship to shore and can quickly move inland.

Ports

The majority of the Nation's bulk commodities and containerized goods are shipped through ports. Ports serve as points of entry for imported goods and egress for exports. Ports often serve as end points of highway and rail freight movements and must be maintained and improved to support efficient and cost-effective trade. While large ports dominate the international freight dynamic, smaller ports support regional and local economies.

A lack of funding has resulted in deferred maintenance of Federal channels that serve coastal ports. Currently, the constructed depths and widths of entrance channels are available only 35 percent of the time.

Inland Waterways

The Nation's approximately 12,000 miles of commercially-active, navigable waterways provide an efficient, cost-effective means of transporting goods to domestic and international markets. A tremendous amount of goods are transported on waterways each year, estimated at

[3] A revenue ton mile (RTM) is the movement of one ton of freight one mile for revenue.

2.3 billion tons in 2007. In fact, United States waterways carried an equivalent of over 50 million truckloads of goods last year. However, much of the critical infrastructure for waterborne transportation is in dire need of repair. More than one-half of the locks and dams in the United States are over 50 years old. The outdated nature of this infrastructure results in an average of more than 50 disruptions per day, causing unscheduled delays of many hours and driving up costs.

Pipelines

Natural gas provides almost 25 percent of the Nation's total energy consumption, and petroleum provides approximately an additional 40 percent of energy consumption. These commodities need to be transported quickly and safely, and pipelines move these products efficiently at a high volume. Today, there are almost 2,500,000 miles of pipelines in the United States—enough to circle the globe about 100 times. Pipelines play an important role in ensuring that the Nation's energy commodities are moved quickly, safely, and efficiently, and in so doing, pipelines support the other modes of freight transportation, as well.

**WITNESS LIST**

Fred Smith
Chairman, President, and CEO
FedEx Corporation

Charles W. Moorman
Chairman, President, and CEO
Norfolk Southern Corporation

James Newsome
President and CEO
South Carolina Ports Authority

Derek Leathers
President
Werner Enterprises

Edward Wytkind
President, Transportation Trades Department
AFL-CIO

# OVERVIEW OF THE UNITED STATES FREIGHT TRANSPORTATION SYSTEM

**WEDNESDAY, APRIL 24, 2013**

HOUSE OF REPRESENTATIVES,
PANEL ON 21ST-CENTURY FREIGHT TRANSPORTATION,
COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE,
*Washington, DC.*

The panel met, pursuant to notice, at 10:00 a.m. in Room 2167, Rayburn House Office Building, Hon. John J. Duncan, Jr. (Chairman of the panel) presiding.

Mr. DUNCAN. Good morning, and welcome to the first hearing of the Panel on 21st-Century Freight Transportation.

Rule 18 of the Transportation and Infrastructure Committee rules allows the chairman, with the concurrence of the ranking member, to designate a special panel to inquire into any matter within the committee's jurisdiction. Chairman Shuster and Ranking Member Rahall have designated this panel to examine the current state of freight transportation in the United States, and how improving freight transportation can strengthen the United States economy—in other words, how we move this country into the 21st century, transportation-wise.

I am honored to have been selected to chair this special panel, and I am excited to be working with my friend Congressman Nadler from New York, as the panel's ranking member.

The safe and efficient movement of freight throughout the Nation impacts the day-to-day lives of every American, from the clothes you wear to the car you drive to the food you eat—the freight transportation system impacts all aspects of everyday life. In 2011, the U.S. transportation system moved 17.6 billion tons of goods valued at over $18.8 trillion.

In the past, the conversation about freight transportation is focused on specific modes of transportation. However, given the multimodal nature of freight movement, it is important to examine the system as a whole. Goods frequently move back and forth between ocean vessels, highways, railroads, air carriers, inland waterways, ports, and pipelines. Bottlenecks arising at any point on the system can seriously impede freight mobility and drive up the cost of the goods impacted. For this reason, improving the efficient and safe flow of freight across all modes of transportation is critical to the health of the United States economy and the future of the Nation's global competitiveness.

The purpose of this panel is to provide recommendations to the committee on ways to modernize the freight network and make the United States competitive in the 21st century. I am excited about

the work we will do over the next 6 months, and I am glad that we have such a talented, diverse group of Members serving on the panel.

I had previously chaired three of the largest subcommittees on this committee, and Chairman Shuster came to me and asked me to serve as vice chairman of the full committee, and I tried to help him coordinate and work to bring the work of all the specific subcommittees together, because when one subcommittee does something it affects the other subcommittees, as well. And so, that is what we are talking about.

This special panel is patterned after something that Chairman Shuster did for the Armed Services Committee in the last Congress and he is very excited about this. He feels that the panel that he headed up for the Armed Services Committee, although a little smaller than our panel, achieved some very good results.

And certainly we have an all-star panel of witnesses here today, and I will say more about them in a few minutes. But I am also very pleased that we have such an outstanding roster of Members. Chairman Shuster told me that he was going to give me a group of some of the more active members of the full committee, and that is what he has done. And also I think that Ranking Member Rahall has done the same with the Democratic members of this special panel.

We are setting up an event some place in the Los Angeles area for the end of May, and we will be going also to Memphis and Louisville and New York and various other places because he wants us to take this panel around the country as much as possible.

But before I introduce the witnesses that we have here today, I would like to call on the ranking member, my colleague, Mr. Nadler, for any comments that he wishes to make.

Mr. NADLER. Thank you, Mr. Chairman. Mr. Chairman, let me begin by thanking Chairman Shuster and Ranking Member Rahall for convening this panel to examine freight transportation in the United States. I can think of no greater policy challenge facing this committee than addressing the needs of the Nation's intermodal freight network.

Mr. Chairman, we greatly look forward to working with you to develop freight policy and funding recommendations for consideration by the full committee. Facilitating interstate commerce is a fundamental role of the Federal Government, and one of the essential responsibilities of this committee. This panel will enable us to focus on how best to strengthen the freight network across all modes of transportation to meet current and future goods movement demands, whether it be grain shipments on the Mississippi, or 2-day Amazon.com deliveries to a New York City apartment.

The safe and efficient movement of freight is critical to the Nation's economy and global competitiveness. Our economic competitors are rapidly upgrading their transportation networks to meet the needs of the global economy. Unfortunately, we have not. And our transportation systems cannot efficiently meet the changing demands of the 21st-century economy. This panel has a real opportunity to address how we, as a Nation, and as a Congress, prioritize our efforts to strengthen our economy.

With regard to freight transportation, this requires that we look beyond just highways. We need to consider the critical roles that our ports, inland waterways, intracoastal waterways, airports, and freight railroads play in the movement of freight and commerce. Planning and prioritizing freight investments for the future requires an integrative and strategic assessment. This panel is a great starting point for that process.

This panel must ensure that we have the freight policy, strategy, programs, and funding necessary to meet these changing demands. Although the committee has made some progress in freight issues over the years, there is much work to do.

In 2005, the committee, with my strong support, developed the Projects of National and Regional Significance program, the original intent of which was to address major freight bottlenecks and congestion around the country. To that end, the SAFETEA–LU program provided dedicated funding and advanced critical freight megaprojects, including the Cross Harbor Freight Movement Project in New York, CREATE in Illinois, the Alameda Corridor-East in California, and the Heartland Corridor in Virginia, West Virginia, and Ohio.

Although the Projects of National and Regional Significance program funded a discrete set of critical freight projects, these types of projects continued to face significant hurdles to funding under Federal-aid Highway Programs. In 2008, the Government Accountability Office, GAO, found a series of continuing barriers to funding freight projects, including: freight projects face competition for public funds and community support in the planning process; a lack of coordination among Government entities and private-sector stakeholders in advancing freight projects; and limited or restricted availability of public funds available for freight transportation projects.

In 2012, Congress took some steps to begin addressing the needs of goods movement in the context of our current surface transportation programs. But many of the same barriers GAO identified in 2008 continue to exist.

MAP–21 authorized some incentives to encourage States to develop highway freight plans and strategies, and required the Federal Highway Administration to designate a national freight network. Although MAP–21 recognizes the important Federal role in creating a strategic vision for our freight system, there remains much work to do to expand this vision to include all modes of freight transportation—highway, rail, water, and air—to ensure that the resources are available to implement this vision.

Unlike SAFETEA–LU, MAP–21 does not provided dedicated funding for national freight projects under the Projects of National and Regional Significance program. In addition, MAP–21 requires that almost all surface transportation funds be provided to States by formula. Although this State-based system accommodates State and local surface transportation projects well, it is poorly suited to address or to fund critical transportation infrastructure projects such as major freight projects which provide broadly dispersed benefits, but impose substantial localized costs. Such projects are critical to the health and welfare of the national economy, but difficult, if not impossible, to fund through traditional State highway for-

mula apportionments. Therefore, MAP–21 did not address what are arguably the most challenging aspects of implementing freight policy: what to pay for, and how to do it.

How best to fund and advance the freight transportation system over the long term is an overarching and critical question facing this panel. We need the vision, the plans, and the means to address the Nation's goods movement needs, and strengthen their economic competitiveness. The recommendations of this panel must lay the foundation for policies and resources to meet the future needs of our intermodal freight network. We should not be constrained by looking only at the transportation network we have, but rather, we should explore and evaluate policies that will develop the network we need for the future. That is our charge. And working together, we can meet these challenges.

I look forward to hearing from the witnesses, and to working with my colleagues to develop a strategic vision for modern and competitive freight transportation—freight infrastructure system that we can recommend to the full committee. I look forward to working with you, Mr. Chairman, and with the Members from both parties, and I thank you and yield back the balance of my time.

Mr. DUNCAN. Well, thank you. Thank you very much, Mr. Nadler. As I mentioned, this panel is patterned after one that Chairman Shuster did for the Armed Services Committee, and that panel was smaller and the chairman thought we should keep this panel small. But we had so many Members on both sides who wanted to serve on this panel, that we did end up expanding the membership.

Ordinarily, under our rules that we are operating under this year, we have opening statements just from the chairman and the ranking member. But because this is the first meeting of this special panel, I have asked each Member to give a brief 2-minute opening statement. And ordinarily, we go by when they arrive at the hearing. But for these opening statements, I am going to go by seniority. So I will now call on Mr. Miller.

Mr. MILLER. Well, thank you, Chairman Duncan. And I want to thank you for also coming down to my area next month, which is—I remember you coming there 14 years ago. Met at the Ontario Airport, which, I hate to say, is an extremely underutilized airport today. I know Congresswoman Hahn and I have discussed transferring authority back from LAWA to Ontario because they have just taken—stripped all the flights.

But if you look at the Port of Long Beach in Los Angeles, they make up the largest U.S. container port complex in the United States. And some people think that the economy has been down. But if you look at the Port of Long Beach in 2010 they actually set a record, all-time high for movement coming through our area. And this panel plays an important role in safe and efficient flow of freight across the country.

I am excited to be on this panel. It is a huge issue in our region, because much of the development growth of commercial in our area has been because of the rail and truck transportation throughout southern California coming from our ports. Colton Crossing is a great example, if you look at Union Pacific and BNSF. That is a

major, major connection of rail throughout the United States from—coming in from the Long Beach and the L.A. Harbor.

But California's trade corridor is huge when it applies to cargo coming in from Asia. The freight arrives in southern California ports, gets transferred by rail and truck and stored in warehouse and distribution centers throughout southern California. And if you go down there, you will see when you drive on the freeway the impact of rail. You see it at grade crossings, and the impact of truck traffic going to those warehouses that store the goods that come to the United States from Asia, specifically, and are transferred throughout the United States.

Ontario National Airport is a hub for UPS also, and this sequestration has had a major impact on them being able to ship goods back and forth. And that is something this panel, I think, needs to address also.

Southern California estimates that the next 30-year freight movement will increase by three times throughout our region, and this panel needs to address that and look to that. And I thank you for your time and yield back.

Mr. DUNCAN. Thank you very much. Mr. Sires.

Mr. SIRES. Thank you, Mr. Chairman, for holding this panel, this meeting, and I want to thank Chairman Shuster and Nick Rahall for thinking forward.

You know, I represent a district in New Jersey which has all the topics that we are going to talk about. We talk about rail, we talk about ports, we talk about shipping, we talk about highways, we talk about pipelines, which was the latest, going through Jersey City into New York, which was a big issue.

And the concerns that I share with members of the committee is that the district that I represent is very congested. And we have an issue now where, as the Panama Canal is being finished, we have to raise the Bayonne Bridge so we can get the super-tankers in to the district and move the merchandise out.

Eighty percent of the merchandise that comes through the Port of Elizabeth and Port of Newark is basically consumed in the region. So we have to move it in the region. And it seems to me that everything that we move is around the New Jersey Turnpike. So we have to make sure that moving freight is not just through trucks, but to use every single mode of transportation so we can alleviate the congestion in areas that are like mine.

So I am really looking forward to this panel. I think we will be able—representing the districts that we represent, we will be able to make some real good suggestions. I just hope we take some of this up in the future.

You know, I know I speak to the Port Authority constantly. And the growth that we expect in our area is immense, because of the new—the expansion of the canal. And obviously, our biggest trading partner, Europe. So—and obviously, also, the region that is just so large, in terms of consuming goods.

So, I look forward to serving on the panel, and thank you very much for putting me on this panel.

Mr. DUNCAN. Thank you very much.

Mr. MILLER. Mr. Chairman, might I point out one thing?

Mr. DUNCAN. Yes, Mr. Miller.

Mr. MILLER. In my opening statement I ran out of time, but I am glad to see FedEx is here, because they have a hub in Ontario Airport also, and tremendously being impacted right now by sequestration.

Mr. DUNCAN. All right. Well, thank you very much. Next on our side is Mr. Crawford.

Mr. CRAWFORD. Thank you, Mr. Chairman. I want to thank all the witnesses for joining us here today. And all of you represent critical interests throughout the freight transportation. Each of you can offer this panel a unique perspective into how our committee can encourage economic growth and job creation through improving our Nation's freight transportation network.

I represent the First Congressional District of Arkansas. And we are blessed with a variety of transportation modes. My district contains hundreds of miles of rail lines and highways, and the entire Arkansas border of the Mississippi River. Each of these modes of transportation offer unique benefits to the businesses that set up shop in my district. Farmers in the district will regularly rely on a combination of trucks, barges, and trains to move their crops throughout the country and overseas.

Just across the river from my district is the headquarters of FedEx, which just celebrated its 40th anniversary—congratulations, Mr. Smith. FedEx helped pioneer intermodal transportation, and continues to advance the industry today, delivering packages through the air, by ground, and by sea. In just 40 years, FedEx has expanded their operation from delivering 186 packages on their first night to 4 million pieces of freight per day. I am glad to have the founder and CEO of FedEx, Fred Smith, here today, and look forward to his testimony.

I will just—on a brief, personal note, I have a good friend that has worked for FedEx for, I guess, going on 20 years. And I texted her as we were coming into the hearing. I said, "I have got your boss in front of us," and she said, "That can't be, my boss is with me today." And then it dawned on her who I was talking about. She goes, "Oh, you are talking about Fred Smith." So I just got that text. I think the light went on, and she knew who I was talking about. Thank you for being here.

Our Nation's freight system attracts businesses to the United States, strengthens local economies, and puts Americans to work. However, all of these advantages will disappear if we fail to maintain and strengthen our infrastructure. I am honored that Chairman Shuster has selected me for this special panel, and I look forward to working with my colleagues on this panel over the next 6 months to gather the best recommendations for the committee to improve our freight network. Yield back.

Mr. DUNCAN. Thank you very much. Ms. Hahn.

Ms. HAHN. Thank you, Chairman Duncan, Ranking Member Nadler. I am really happy to be part of this panel. And I am really looking forward to the work that we are going to accomplish. I also want to give a shout-out and congratulate FedEx on your 40th anniversary. It is a great story that Fred Smith started in 1973, with 14 small aircraft from Memphis delivering 186 packages to 25 cities around the world. We know that you are a global company today. Congratulations.

For me, I live with the Port of Los Angeles in my backyard, in San Pedro, California. And so freight policy is always on the forefront of my mind. When I came to Congress from the Los Angeles City Council, I was concerned that I didn't think there was enough dialogue about our Nation's ports and our freight policy. So I cofounded, along with Congress Member Ted Poe from Texas, the Port Caucus. And we believe that we are going to finally bring the kind of attention on our Nation's seaports that needs to happen. I was excited when the President, I think for the first time, mentioned ports in his State of the Union Address.

With the Panama Canal, numerous ports across the country are trying to dredge to be able to take the Panamax and the New Panamax ships. At the Port of Los Angeles, we just completed our dredging project, but this isn't true for other ports. We need to examine spending of the Harbor Maintenance Trust Fund. We collect these funds at our ports, but they are building up a surplus in the trust fund. I think we should be able to access these funds and ensure that all the ports that contribute receive an equitable share of those funds.

When I discuss our Nation's competitiveness I always say it is not just how deep our ports are, but it is the quality of our landside infrastructure that is going to matter. We wouldn't be here today on this panel if we didn't recognize that we all have major freight infrastructure needs: the quality of our highways, bridges, grade separations, interchanges. But we can't just fix one region's freight infrastructure and not another, because, as we know, it is a national system.

For example, the goods that leave the Port of Los Angeles take 48 hours to arrive in Chicago, and then another 30 hours to travel across that city. That bottleneck means that our Nation is at an economic disadvantage. We have higher cost for consumers, more congestion, more pollution, and less jobs. We need to stop this piecemeal system and develop and invest in a strong national freight system. And I know that the recommendations that this panel comes up with are going to be a huge step in solving that problem in our country. Thank you.

Mr. DUNCAN. Thank you very much. None of the other Members on our side want to make an opening statement. Mr. Lipinski, do you have any statement you would like to make at this time?

Mr. LIPINSKI. Thank you, Mr. Chairman. I want to thank you for—and Chairman—and Ranking Member Nadler for holding this hearing. And I am pleased that Chairman Shuster and Ranking Member Rahall created this panel, and honored to be a member of it.

We know that all of us here in this room understand that we have to overcome the silos that we have here in the committee and develop a plan to deal with our multimodal freight network that is absolutely critical to our economic prosperity.

I had the privilege of serving as Illinois' most senior member on the committee, and as the sole democratic representative from the Midwest on this panel. Our region—in particular, northeastern Illinois, is critically important to the movement of people and freight. That is because from highways to aviation to railroads, pipelines,

inland waterways, to Great Lakes shipping and beyond, we are at the heart of our Nation's transportation system.

Unfortunately, we all know that northeast Illinois' transportation network is antiquated and can't meet current, much less future, freight growth. I know that that has already been mentioned by a number of the Members here, on the panel. And I am hoping that this panel will visit the Chicago area, northeastern Illinois, to see firsthand its importance in the challenges that we face.

In order to begin meeting our needs, I secured $100 million seed money for the CREATE rail modernization program under SAFETEA–LU. It is an important public-private partnership that will reduce congestion of the Nation's rail hub, and will improve our transportation system's reliability, and more efficiently move goods to and from cities such as New York, Los Angeles, and Seattle. We have gotten off to a good start on CREATE, but we still have a ways to go.

An important question for this panel is how to advance large-scale projects like CREATE. I think one of the answers is to bring back the Projects of National and Regional Significance program, which I know Mr. Nadler had mentioned.

So I am looking forward to working on this panel over the next 6 months to develop solutions and to make our freight network more efficient and, today, to hear from our witnesses. Thank you.

Mr. DUNCAN. All right. Well, thank you very much. And I want to introduce our panel at this time. This is my 25th year on this committee, and some of the veterans around here will remember that many years ago we had some hearings that lasted 7 or 9 or 10 hours and nobody would be here to hear the witnesses, none of the Members, and the hearings would drag out.

And so, when I started to chair the Aviation Subcommittee back in 1995, I said my ideal hearing was one with a panel of five witnesses, and we would not have hearings that drag out for a long, long time. We had many other people who wanted to testify on this panel today, and maybe we will be able to get to them, get to some of them at later hearings. But each one of our witnesses today was chosen for a very specific reason, because they all represent different parts of our transportation world.

And our first witness, I am very honored to have Fred Smith from FedEx. Some people have already mentioned that FedEx is celebrating a big anniversary, and that it started with 186 packages on its first day and now delivers more than 9 million daily and more than 300,000 employees and connecting 220 countries. I would guess that Mr. Smith is probably amazed at how his company has grown over the years. But great success, and certainly Mr. Smith is one of the most respected men in Tennessee. He is almost 400 miles from me in east Tennessee, but we are proud of him, nonetheless.

Next we have Wick Moorman from Norfolk Southern. Norfolk Southern is one of the greatest companies in this Nation with a long history, a Class I railroad. Railroads carry more freight than any other mode of surface transportation and operate on more than 200,000 miles of tracks throughout the Nation. And last year—and this always has impressed me—the freight railroads spent almost

$14 billion of their own private capital to improve and expand their tracks.

Next we have Derek Leathers, president of Werner Enterprises. Werner operates one of the largest trucking fleets in the world. More than 250 million trucks carry freight on our highway system each year. Many of the small communities don't have a railroad or an airport or a waterway nearby, but people live and work and shop along the Nation's 4 million miles of highways and roads. And, as a result, many consumer goods are often transported on the highway system, most of them for at least part of its journey.

I am very pleased also to have Jim Newsome. Jim Newsome has had a very distinguished career. He is the president of the South Carolina Ports Authority, which operates the port in Charleston, South Carolina. But he also has extensive experience as a senior executive in the container shipping industry. And as such, he can offer a unique perspective on maritime transportation issues.

And last, but certainly not least, we have Mr. Ed Wytkind. And Mr. Wytkind is joining us from the Transportation Trades Department of the AFL–CIO, where he is president. He has been before this committee on several occasions.

Transportation workers play a key and very important role in the performance of the freight system. And I am glad that he is here today to discuss their role in improving our freight transportation system.

Just before we start the testimony I would like to call on my colleague, Mr. Cohen. Mr. Cohen is not a member of the panel, but he has made a special effort to be here this morning to welcome one of our witnesses.

Mr. COHEN. Thank you, Mr. Chairman. I appreciate the volunteer courtesy. It is indeed my honor to be here, and to congratulate the panel on its work and its selection of its first testifier.

There could be nobody better in this country—and with all due respect to the other members of the panel, who are highly esteemed experts—to give the opening remarks on the 21st century than Fred Smith. Because the 21st century started in 1973, when he started FedEx, and that was the 21st century of transportation. Knowing Fred, he is already in the 22nd century. He is a forward-thinking man, and Memphis is proud to have had people that were innovators and shook the world, from Kemmons Wilson, who learned how to do the motel industry and the hotel industry, to Elvis Presley, to Fred Smith.

[Laughter.]

Mr. COHEN. There is nobody that represents their company, probably, as intimately and as recognized as such as Fred Smith and Federal Express. And what he has done for the country, in volunteering as a Marine and serving in Vietnam, in serving on the World War II committee to put together the funds and the planning for the memorial on the mall, and for his work on the Energy Security Subcommittee, which is so important to our country's security in the future, and to my city, where anything involved with our city that is important, whether it is the FedEx Forum, or whether it is the zoo which I visited just last week with its beautiful Teton Park tribute to the grizzlies and the wolves and the photography of all that area which I visited and appreciated.

Fred Smith knows transportation. And my father told me that in his time, "What was good for General Motors was good for the country" was a credo. I think today what is good for Federal Express is good for the country. I welcome Fred Smith and I am proud that the committee has allowed me to introduce him. Thank you, sir.

Mr. DUNCAN. Well, thank you very much. Mr. Nadler turned to me and he said he believes this is the first time Elvis Presley has been mentioned at one of our hearings, and I think that is true. [Laughter.]

Mr. DUNCAN. Again, I would like to welcome our witnesses, and thank them for being here. And I ask unanimous consent that their full statements be included in the record.

Ordinarily, we ask our witnesses to limit their testimony to about 5 minutes. Because of the importance of the subject matter, if you go 6 or 7 minutes we are not going to worry about it too much.

But, Mr. Smith, you may begin.

**TESTIMONY OF FREDERICK W. SMITH, CHAIRMAN, PRESIDENT, AND CHIEF EXECUTIVE OFFICER, FEDEX CORPORATION; CHARLES W. MOORMAN, CHAIRMAN, PRESIDENT, AND CHIEF EXECUTIVE OFFICER, NORFOLK SOUTHERN CORPORATION; DEREK J. LEATHERS, PRESIDENT AND CHIEF OPERATING OFFICER, WERNER ENTERPRISES, INC.; JAMES I. NEWSOME, III, PRESIDENT AND CHIEF EXECUTIVE OFFICER, SOUTH CAROLINA PORTS AUTHORITY; AND EDWARD WYTKIND, PRESIDENT, TRANSPORTATION TRADES DEPARTMENT, AFL–CIO**

Mr. SMITH. Thank you very much, Mr. Chairman and Ranking Member Nadler. I appreciate being invited to appear here to represent our 300,000 team members around the world. I appreciate the kind remarks of our Congressman Cohen, who works very hard to represent our area so well. I want to apologize to the southern Californians for our Grizzlies who are going to finally beat the Clippers later this week, although we have struggled a little bit with that in the preceding days.

As has been mentioned, FedEx covers an awful lot of the transportation spectrum. And I want to commend you, Mr. Chairman and Chairman Shuster and Ranking Member Rahall of the full committee for setting up this panel. It is very important. Having had a career in transportation that spans now 40 years, I have watched the important effect that the leadership in the Congress in both Democratic and Republican administrations have had on the well-being of this country through far-sighted transportation policy.

When I first began in transportation, logistics measured as the cost of transportation, inventory, carrying cost, and warehousing were about $.15 out of every dollar in the economy. And because of the substantial improvements in the Nation's infrastructure, and the deregulation that took place beginning in the early seventies through 1994, logistics costs were reduced to about 9 percent. And that is a huge increase in national wealth and productivity and well-being.

It is essential, however, for the Congress to recognize that those productivity increases will begin to go the other way, unless we can modernize a lot of our transportation infrastructure.

As has been noted, FedEx Corp. has four operating divisions: one, the original Federal Express, which is a worldwide operation of 660 aircraft, 47,000 trucks serving 220 countries, and moves about 4 million shipments a day. In addition, we have FedEx Ground headquartered in Pittsburgh, which is the second-largest ground parcel company, and FedEx Freight, which is located in Memphis, and its operating headquarters is in Arkansas, which is the largest less-than-truckload operation. Plus we have our trade networks unit which moves intermodal goods by rail and sea. And, all told, the FedEx systems move, as you noted, Mr. Chairman, about 9 million pieces a day.

In the air side of the business, the fundamental issues are twofold. Number one, we have to move forward and get a Next Generation air transportation, air traffic control system. We waste millions and millions of gallons of fuel a day, impede the productivity of our Nation's commerce and the traveling public by not modernizing our air traffic control system to a satellite-based system that allows much more flexibility and efficiency.

The second key element in improving our air transportation system are more runways. We built one in Memphis in 2000, a worldwide-capable runway that now allows the FedEx Express 777's to fly nonstop from Memphis to points in Europe and Asia and the reciprocal.

In the ground transportation business I think the issues are equally as straightforward. Number one, we need a funding mechanism in the form of a revised fuel tax, or a vehicle mileage tax, which the user community almost universally supports in order to fund additional infrastructure, particularly in the congested areas of the country like D.C., the Northeast Corridor, as been mentioned, and New Jersey, and southern California.

The second thing which we feel very strongly about and is a very easy and quick solution, is to permit the use of longer vehicles in the sectors of the industry that use twin trailers. Today those are limited to 28 feet each. And the reality is, in the ground parcel business, the vehicles are significantly underutilized because the traffic being generated by the e-commerce world, the direct shipping, and the lighter weight, smaller packages, the vehicles are not very well utilized. They pull approximately 22,000 to 24,000 pounds in the two 28-foot trailers.

In the less-than-truckload industry the same thing applies. On there the cube weight ratio will get between 26,000 and 28,000, generally. So, if the Congress permitted the use of somewhat longer vehicles, our recommendation is 33-foot vehicles. You would have very quickly vast improvement in national efficiency because you would burn hundreds of millions of gallons of fuel less, with the attendant reduction in emissions. You would increase the productivity of the national transportation system, making it more efficient and less costly to the consumers. And the third thing that would happen is that you would have significantly enhanced safety because fewer vehicles on the road at the end of the day is the most important element in reducing the number of accidents.

So, we feel that, as I mentioned in the air transport sector, the Next Generation air transport—air traffic control system is essential. Continue building more runways. A new funding mechanism for our infrastructure. And the permission to use longer twin vehicles, not—it does not require any weight increase, which puts more pressure on our infrastructure, in terms of repairs and things of that nature.

I would also note that FedEx, as I mentioned, is a very heavy user of intermodal services, including the excellent services of Norfolk Southern, who just built a big intermodal yard just east of Memphis. And we move a significant amount of goods through the ports of the United States. So, clearly, the efficiency of our rail and our port system is equally important to the other sectors that I just mentioned. But I think the solutions there are very specific, very straightforward, and really not subject to a lot of debate, since the effect of these measures would be so profound.

Thank you very much, Mr. Chairman.

Mr. DUNCAN. Well, thank you, Mr. Smith.

Next we have Mr. Moorman.

Mr. MOORMAN. Thank you, Chairman Duncan, Ranking Member Nadler, panel members. I certainly appreciate the opportunity to discuss America's freight rail system. And I want to say it is my honor to do so on behalf of our 30,000 customers, our 32,000 shareholders, our 39,000 suppliers, and our 8,700 customers, which include FedEx, Werner Enterprises, and the South Carolina Port. So, gentlemen, I thank all of you, as well.

I will be using a few images today, so if you would take a look at the screens, first is our tribute to FedEx.

[Laughter.]

Mr. MOORMAN. I thought I would tell you a little bit about our business. Norfolk Southern is the fourth largest privately owned U.S. railroad. We transport about 7 million shipments a year. Our tracks primarily serve the eastern U.S., but with our connections to ports and other modes we effectively access the world. And while my comments today highlight Norfolk Southern, I do want to say that America's 7 Class I railroads and 550 short lines do operate as a network, and we share the opportunities ahead.

Last week the Wall Street Journal happened to say that railroads—and I quote—"make headlines only when calamity strikes." Well, that may be true, but because of our tremendous safety records, calamity strikes very rarely in our business. And we generally work in the background, safely and economically moving this Nation's raw materials, intermediate products and finished goods wherever they need to go.

In our company's case, we have been doing that for 186 years—not 186 packages, I noticed—and we are planning at least for that many more. And because we think like that, it is important to understand that in railroading we have to make very expensive, long-term bets, and then hope to make adequate returns on them, even though our crystal ball is often cloudy.

Our locomotives last for more than 20 years. Freight cars last a lot longer than that. New tracks can carry traffic for decades. And big terminals—we are expanding one in Bellevue, Ohio, now—serve, literally, generations of customers. We had a bridge over the

Ohio River that just turned 100, and our chief engineer promises me faithfully that if we continue to invest, it will be there another 100 years.

One example that we have a slide of is what we call the Crescent Corridor. It is an example of strategic investment that will improve infrastructure, reduce transit times, increase capacity, and provide a much better transportation alternative for the enormous amount of freight that currently moves by highway from New Jersey to Louisiana. And we had a slide up, I think, that showed the new terminal that Mr. Smith just mentioned outside of Memphis.

The Crescent Corridor is a 10-year project, $2.5 billion cost shared by NS and partners, and we have a screen that shows just the benefits for a single State. Messrs. Duncan, Hanna, Nadler, and Sires are familiar with the corridor's importance, because your district includes many of its components. And also—and Mr. Lipinski pointed this out—Ms. Brown and Mr. Lipinski have been leaders for years on the CREATE project and the high-speed rail projects that will serve Chicago. They are massive projects and your efforts are appreciated. They are not small, they are not inexpensive, but they will serve generations to come.

We are getting ready for traffic from the Panama Canal expansion. We are moving crude oil today. We are serving the domestic natural gas industry. We are hiring a lot of military veterans and Reservists. And with leaders from labor organizations like Mr. Wytkind, we are training tomorrow's workforce, we are reducing our carbon footprint, and improving technology to use fuel. We are contributing to the goal of increasing exports. In fact, we are partnering with Mr. Newsome and his team, developing the South Carolina Inland Port. It is a great opportunity.

I will show you another slide here of what we have done with a similar project in Virginia at Front Royal, and you can see all of the industry that flocks to these locations when we build these facilities.

So, what can Government do? First, support and then ardently resist any attempt to alter freight rail's continuing ability to earn adequate returns and invest in our companies. For every revenue dollar we earn, we return $.40 to infrastructure and equipment. Just through—from 2010 through the end of 2013, we, Norfolk Southern alone, will invest $7.5 billion in private capital. That sustains jobs. In the last 3 years we have hired more than 9,000 people, and will hire 1,200 this year.

And this is critically important because industry's jobs and taxes want to go where the railroad is. Last decade, we have located 1,021 new and expanded facilities along our lines, which represent almost $30 billion in customer investment, and about 50,000 jobs. And that is just one railroad.

The second thing, if you can do it, put the economy on a sound footing, because we are all creatures of the economy. To the extent that we have a stable economic environment for long-term growth, and can see a clear path forward, it helps all of us.

And then, finally, find sensible ways to allow the private sector and our partners to invest in projects that will serve the economy of tomorrow. And in the regulatory arena I will say that the longer it takes us to steer through regulatory hurdles, the longer we all

wait for economic growth. Promote regulations that reflect today's conditions and today's technology, so that they enhance, rather than deter, safety, productivity, and investment.

Private-owned railroads are not only a barometer of the economy, but they are an essential element in solving this country's freight transportation problems. We are planning on growing, and we are investing for the future. And we hope that, working with you, we can all look ahead and do everything possible to make that happen. Thank you.

Mr. DUNCAN. Thank you very much, Mr. Moorman.

Mr. Leathers.

Mr. LEATHERS. Chairman Duncan, Ranking Member Nadler, and members of the panel, thank you for the opportunity to testify. My name is Derek Leathers, and I am the president and chief operating officer of Werner Enterprises. We are a diversified logistics company with nationwide and global services, providing truckload freight management and intermodal services to our customers. I point out the multimodal nature of our business, because I think it is that kind of collaboration that we do every day with gentlemen on this panel, as well as others across the Nation, that help deliver Americans goods.

Mr. Chairman, we look forward to working with this panel to craft a reauthorization bill that makes the necessary spending decisions, and puts into place the reforms which will allow the trucking industry to move the Nation's freight more safely, more cleanly, and at a lower cost to our customers and, ultimately, to the end consumer. While I am testifying on behalf of Werner, my statement is consistent with the position of the American Trucking Association, of which we are a member.

Unlike other modes which control their capital investment decisions, the trucking industry is wholly dependant on Federal and State and public agencies to spend the $33 billion in highway user fees the trucking industry contributes annually in a way that provides the industry with good return on our investment through the improvements and highways and infrastructure on which we operate.

With MAP–21's addition of performance measures, and the creation of a new freight program which includes identification of a highway freight network, Congress took significant steps toward improving the Federal-aid Highway Program. We encourage the committee to build on this progress by dedicating resources to projects that address major freight network bottlenecks.

Highway bottlenecks cost the trucking industry $19 billion each year in lost fuel, wages, and equipment utilization. We also recommend a much greater investment in the National Highway System, which comprises just 5 percent of highway miles, yet carries 97 percent of truck freight and 55 percent of all traffic. The ATA supports dedicated Federal spending for last-mile highway intermodal connectors whose generally poor condition affects the efficiencies of all our modes.

It will be difficult, however, to make these strategic infrastructure investments without more revenue. As the committee is well aware, the Highway Trust Fund will be in serious financial straits in 18 months from now. We cannot continue to rely on the general

fund to bail out the program year after year. And reducing the size of the program to match current user fee receipts is simply untenable, in our view.

It is time for Congress to make the difficult but vital decision to raise and/or index the fuel tax, or do both, to ensure stable funding is available to address the costly deficiencies facing our highway network. Alternative funding and financing arrangements such as tolls, vehicle miles taxes, in our view, are of limited utility and are a far-less efficient source of project funding than fuel tax and other traditional revenue sources.

Mr. Chairman, it is critical that we make the most of our limited highway capacity. The growth in an automobile and truck travel continues to greatly outpace new lane miles of highway, and that trend will continue. Current Federal policies prevent the trucking industry from operating its cleanest, safest, and most efficient equipment. The United States has the lowest weight limits in the industrialized world. This makes our domestic industries less competitive, and acts as an artificial tax on the American people, by unnecessarily raising the price of consumer goods.

More importantly, these regulations force the trucking industry to operate more trucks than are necessary, increasing crash exposure and causing trucks to burn more fuel, which increases emissions. There are hundreds of studies and decades of actual experience with these higher productivity to support giving States greater authority to increase their limits and to modernize Federal length standards without a detrimental impact on safety or the condition of the highway infrastructure.

Finally, while we are bullish on the future of intermodal, and actively work with our customers on modal conversion, claims that these changes will have significant impact on modal share, in my view, are overstated. Seventy percent of all freight moves by truck today. And although intermodal volumes are growing rapidly, intermodal's 1.8 to 2.2 percent share is unlikely to change, even in the most bullish projections.

We will continue to do our part working with the rail industry and our partners at NS to find opportunities for intermodal conversion. But that will not change the capital investments still necessary to maintain and improve the Nation's highways that are still required to support the remaining 70 percent of freight movement. Thank you for the opportunity to testify, and I look forward to your questions.

Mr. DUNCAN. Thank you very much, Mr. Leathers.

Mr. Newsome.

Mr. NEWSOME. Chairman Duncan, Ranking Member Nadler, and members of the panel, I am honored to have the opportunity to testify here today.

The container shipping industry has been instrumental in the significant growth of globalization over the last 50 years. U.S. shippers enjoy a very competitive market for ocean transportation services. The service provided for containerized cargo is remarkably reliable, and has supported the establishment of complex import and export supply chains routinely utilized by major U.S. corporations in their global transactions.

It also should be noted that ports face significant competition. Ocean carriers have a choice of where to call and when. If a port is unable to provide an efficient and cost-effective option, its customers will go elsewhere. The prospect of heightened competition has been mentioned here this morning between east and west coast ports as a result of the Panama Canal expansion, and it is well-chronicled in industry dialogue.

Globalization and the offshoring of significant amounts of manufacturing have led to significant trade growth, a lot of which was import-related. In the last 5 years, however, the prevailing trend has been an exporting and manufacturing renaissance from the United States. We have some commentary on this on some slides that we are showing while I am giving this testimony.

The idea of doubling exports, as articulated by the Obama administration, seems to have been a worthy and timely goal. A German company which manufactures in South Carolina, BMW, is now the largest single exporter of automobiles from the United States. The global shipping industry, especially the container carriers, has responded with significant investment in new vessels. This year we will see the largest injection of new container capacity into the global container fleet in the history of containerization. Eighty percent of the container ship capacity on order is bigger than can go through the Panama Canal today. And by the time the Panama Canal is expanded in 2015, 50 percent of the container ship capacity and operation will be post-Panamax in size.

These large ships bring dramatic improvements in both economic and environmental efficiency. They require reliable ports at origin and destination to realize these benefits capable of handling such ships productively, and with minimal waiting due to depth or height restrictions.

Ports across the country have made and continued to make significant investment in order to satisfy such requirements. For example, the South Carolina Ports Authority is investing $1.3 billion in the next 10 years in existing and new facilities to handle mainly cargo growth.

The State of South Carolina is additionally investing $700 million in port-related infrastructure. In view of the uncertainty with regard to the availability of Federal harbor deepening appropriations, the State of South Carolina has set aside the entire $300 million cost of our deepening project, both the State and the Federal share. Our deepening project is designed to provide a 50-foot harbor comparable to others already authorized on the east coast, allowing the handling of ships at 48 feet of draft without title restriction, and at half the cost of other comparable deepening projects in our region. These investments are indicative of the strategic role that ports play in the economic development of the southeast region and our country.

Going forward, it is vital that a viable strategy and process is established at the Federal level to bring the port capability in line with the handling requirements for such large ships. This is a prime responsibility of the Federal Government, as these are Federal harbors.

The process for studying and funding harbor improvements and other restrictive infrastructure issues such as low bridges has nei-

ther been timely, predictable, nor well funded. These issues should be addressed in a water resources development act, such as the legislation being contemplated this year by this committee. However, there have been only two WRDA bills signed into law since the year 2000, one in the year 2000 and one in 2007.

The legislative process for approval and funding of major port projects has been—also been made more difficult by the demise of the Federal earmark, which is a traditional source of funding such projects. Accordingly, the funding is woefully short of the requirement and commitment needed to modernize the U.S. port network, and is an impediment to future freight mobility.

The good news is that the shortcomings of the harbor freight improvement process seem to be well-recognized and some improvements are at hand. The U.S. Army Corps of Engineers has proactively developed new process guidance to speed up the study of such port infrastructure projects. They have issued a first paper relative to formulating a cogent strategy for prioritizing harbor improvements.

But sustainable improvement will only be realized when a private sector-type capital budgeting approach is taken to such port improvement projects entailing the following major components: the establishment of a significant and predictable capital budget to address U.S. harbor shortcomings over multiple years; the development of a clear system of prioritization for such projects relative to cost benefits and the capability they provide; a rule-based authorization system for ports, which takes the place of individual authorizations when a cost benefit hurdle is met; the recognition, potentially painful, that all ports cannot be deepened with the current Federal resource constraints, and that there will be winners and losers in the prioritization scenario; and longer term, the need to potentially find a user fee system to cover harbor improvements does not exist for harbor maintenance.

I earnestly commend the attention of this panel and the full committee to this important infrastructure priority, without which the benefits of exporting and manufacturing growth cannot possibly be realized. Thank you.

Mr. DUNCAN. Thank you very much, Mr. Newsome.

Mr. Wytkind.

Mr. WYTKIND. Thank you, Mr. Duncan and Mr. Nadler. And I want to thank Mr. Shuster and Mr. Rahall for not only forming this panel, but for giving transportation labor the opportunity to help you launch the work of this panel. I commend the committee. It has always been a leader in trying to advance national debates on these important issues, and I am honored to be a part of this process.

I am also honored to offer the perspective of transportation workers. Whether they work in the freight rail, port, maritime, aviation, highway, or trucking sectors, they together make up a transportation system for America that works and that delivers for the American people and American businesses. They are also members of the 33-member unions of the Transportation Trades Department, AFL–CIO, that I am the head of.

This is an industry that has always supported middle-class careers. In no small measure, these good jobs have been the result

of the collective bargaining rights that many transportation employees have secured. These are the types of jobs that support our communities and, in turn, drive our economy but, unfortunately, continue to allude too many Americans that are still out of work.

We appear today to urge the committee to make more strategic investments in freight transportation. They are a way to boost our economy and our shrinking middle class.

Our freight rail members operate and maintain a powerful and efficient network that has become an important driver of our economy. For every freight rail employee hired, another five Americans are gainfully employed. Our maritime, longshore, and warehouse members are employed on vessels and at docks along the east, west, and gulf coast, Hawaii, Alaska, the Great Lakes, and major U.S. rivers. Their work enables the U.S. to export and import goods and fuel the world's most powerful economy.

Our transportation construction unions represent workers who build much of the infrastructure that lies at the center of the freight transportation debate. Boosting investments in freight transportation will create thousands of construction jobs at a time when unemployment in that sector is still stubbornly high.

Our aviation members operate, maintain, and support air carrier operations, both all-cargo carriers and commercial passenger carriers that, combined, carry millions of tons of freight, domestically and across the globe. The Nation's aviation employees, both air carrier employees and those who work in and maintain our air traffic control system, who we also represent, play a pivotal role in our freight transportation network.

Our members combined help to move what this panel has identified as over 17 billion tons of goods valued at over $18 trillion. The DOT, for its part, says that freight tonnage nationally will grow by 70 percent by 2020, with some freight gateways experiencing a tripling of volumes. That single—and, we believe, daunting—fact alone should inspire Congress to make the case for new investments in freight.

We all know the facts. No matter which analysis you read, the conclusion is the same. Our infrastructure is falling apart, and the world's strongest economy is forced to function with an infrastructure that barely cracks the world's top 25. When channels are too shallow to receive large vessels, or railroads are located miles from ports or the aviation system's technology improvements are stalled, unnecessary delays and congestions slow our commerce. Those inefficiencies, in turn, choke the economy and impose costs on businesses that, in turn, undermine our competitiveness and job creation efforts.

There are solutions, plenty of good ideas, that, if implemented, give us a chance to turn this around and to keep pace with an expanding economy. What is missing is the political will in Washington to invest in such a system. Misplaced obsessions, in our view, with austerity crowd out investments in long-term infrastructure and transportation. And we know that those investments are urgently needed. And while the private sector always plays a large role in investing in freight transportation, the Government cannot abdicate its responsibility to provide public funding.

Here are some concrete steps. We agree that the Harbor Maintenance Fund needs to be reformed. We support bipartisan legislation to unlock the funds in the account, and to finally invest in our Nation's ports and channels. We are a big endorser of that legislation and hope it gets completed by this committee.

The surface transportation funding crisis needs to be solved. The Highway Trust Fund is broken, it is facing insolvency by 2015. For 20 years it hasn't seen its buying power go up, and it is now down 33 percent. There is a straightforward way to do this. It requires the political leaders in Washington to tell the truth to the American people and to businesses. Unless we increase revenues flowing into this collapsing fund—yes, by raising the gas tax, I said it, I will say it five more times—our highways, bridges, and public transit systems will fail us and our economy will crater.

In aviation, the FAA is in the midst of transitioning to a satellite-based air traffic control system that will increase efficiency, expand capacity, reduce congestion, and, yes, enhance safety. But Congress must appropriate the funds and stop subjecting the FAA to the fits and starts of funding that we have seen over many years, the most recent one being the sequester nightmare that is canceling thousands of flights, that is idling thousands of FAA workers and subjecting them to furloughs, and yes, is having a rippling effect in the air cargo industry.

Finally, public-private partnerships and the role of innovative finance will continue to be debated. We understand the role of the private sector needs to be robust; we have always supported that. But I hear from the private investment world that without a robust role of the public sector there is no private capital out there to tap into. So, without the right reforms, without a long-term plan to fund these needs, the private capital that is out there, waiting to invest, will not come to the table as robustly as I think this committee would like to see.

We are pleased to join my colleagues here on this panel for this first panel meeting; it is an honor to help you try to develop a policy on freight transportation. We look forward to playing our role in making the process a success and in bringing forward very strong and robust proposals. Thank you.

Mr. DUNCAN. Well, thank you very much, Mr. Wytkind. Great testimony from all of the witnesses. I am going to yield my time first to my Members and start with Mr. Miller.

Mr. MILLER. Thank you, Mr. Chairman. I really appreciate all of your testimony.

Mr. Wytkind, you talked about the impact on FAA workers, and I absolutely agree. I am looking at Mr. Smith, and how your hub facility in Ontario is being impacted by that right now. And I am concerned—the DOT's—considering national freight corridors.

And I guess my first question is going to be to Mr. Leathers and Mr. Smith. And I have a concern because when you consider highways that are impacted, that possibly works in some regions because you might only have one major highway or two, but it doesn't work in southern California.

If you look from the Long Beach and L.A. Harbors, all the—it is like a corridor. It is not a system, it is an actual corridor that is impacted. If you look coming from the harbor, you might impact

the 5, 105, and then it expands dramatically past that to the 91, the 60, the 10, the 210 that have huge impacts on Ontario Airport. And, Mr. Leathers, you see that with your drivers right now in the same way.

And my concern—and I am going to introduce legislation I know the chairman will agree with me on—that we need to look at freight corridors because if you look at just a highway system of 27,000 center line miles, and you don't take into consideration the corridor that is really being impacted, I think we are going to make a huge mistake. And if the DOT were to account for only one pathway for goods movement on a national freight network, and failed to adequately address the complex highway system we have in southern California, I think it is going to have a major impact on our supply chain.

Mr. Smith, do you have any comments on that?

Mr. SMITH. Well, I concur with what you said. I mean, you have to look at these things, particularly in major metropolitan areas, as a holistic region, as opposed to just an individual project. And that has been one of the issues in the past, when you would have a particular project here without regard to the consequences in the entire system. So, all I can do is to concur wholeheartedly with what you said.

Mr. MILLER. Yes, I have got a hub on the rail system in Colton, but I have also got—it is like a warehouse hub for the region. And Mr. Leathers, can you address how it would impact your drivers? And Mr. Wytkind, the same way. You know what your drivers are facing from the harbor going out. You see all the problems we are facing with intermodal systems, especially on our highway systems, trying to get to these warehouse hubs. How would that impact you, if we weren't considering a corridor, rather than just a highway system?

Mr. LEATHERS. Well, I would concur with the general statement that there will be points of greater bottlenecks or points of greater tension in the network. And so, as we talk about investing in the highway system, obviously we have an eye towards all of the ton-miles that we traveling with our trucks. Clearly, however, there are smaller, more—or not smaller, but there are more congestion points of pain in some of these corridors, as you mentioned, that I think we would have to have an eye towards, and we would have to make certain that we had the sufficient funding where the pain was at its greatest extent.

And so, for our drivers, clearly there are areas, and I mentioned intermodal-connected final-mile issues, where we might find ourself more congested than not, that we would certainly expect and hope that we could put attention where the pain is, and you have indicated such in your comments.

Mr. MILLER. Mr. Wytkind, do you have a comment on that?

Mr. WYTKIND. Yes, thank you. Mr. Miller, look, I view this as a simple proposition. We have a freight network that is complicated. There are some metropolitan areas, like yours, that are incredibly congested.

My concern is that if we just have a policy discussion that, say, dedicates new policy initiatives to push for sort of an intermodal

freight strategy, if we don't get new resources directed at those projects——

Mr. MILLER. That is what we are talking about.

Mr. WYTKIND [continuing]. Then we are just going to get into a policy exercise—my problem is that no one has yet put a proposal on the table that is actually going to expand the pie, as opposed to divvying up the pie differently, which, as we know, is collapsing.

Mr. MILLER. We are talking about—DOT is talking about focusing dollars——

Mr. WYTKIND. Right.

Mr. MILLER [continuing]. On these—which is similar to what you are saying. But my concern is we don't focus in on corridors and, appropriately, we are going to have a problem.

And I know—Mr. Wytkind and Mr. Leathers, I got involved in a situation that made some of you happy, some of you unhappy. Some people think because of the issue that rose at the Port of Los Angeles, where Antonio Villaraigosa, mayor of L.A., who is a friend of mine, wanted to make it where you can only have employee drivers use the facility, rather than independent owner-operators. And for some reason, Mr. Wytkind, many of your friends think I am anti-union, but every member of my family is a union except me. I just think everybody should be treated equally.

And the problem I had on that decision made by, say, Los Angeles, was we eliminated 90 percent of the truckers that were hauling goods from that port to other groups out there. And, Mr. Leathers, can you—would you like to comment on that?

Mr. LEATHERS. Our primary——

Mr. MILLER. I know I make some people mad in this, but I have got two guys here that this country needs. I have got union operators and nonunion operators. And one thinks I am their enemy, which I am not, but I am looking at how do you protect 90 percent of the people who use that port.

Mr. LEATHERS. Well, I mean, obviously, we think that, as it relates to the port and some of the rules that were coming out relative to clean air in the ports, we are fully in support of that. And I think our industry has proven our ability and our willingness to invest in equipment that would have and can continue to support those initiatives. I think that is separate from the labor implications and changing people's labor classification in an effort to clean air, because I don't believe those two are linked.

Mr. MILLER. I don't, either. And I think we all—everybody at this group, we need to work as a group here on transportation. Mr. Wytkind, yes.

Mr. WYTKIND. I would just add that, first of all, I would love to offer the opportunity for Mr. Leathers' employees to be members of a union.

[Laughter.]

Mr. WYTKIND. So maybe you can bridge those issues for us.

Mr. MILLER. But many people want to own their own truck and be——

Mr. WYTKIND. Right. I don't want to get into a long debate about it, either. But the issue involving that particular area, there are a lot of working condition issues that involve those drivers. There is a lot of misuse of how we classify a lot of workers in our economy.

It is not unique to the trucking industry, it has been all over the place.

Mr. MILLER. My comment was——

Mr. WYTKIND. So my point is it is a longer discussion, but——

Mr. MILLER. I am——

Mr. WYTKIND [continuing]. There is a lot of problems that these drivers have experienced over their careers.

Mr. MILLER. I am not anti-one against another, I am saying we need to work as a——

Mr. WYTKIND. Understood.

Mr. MILLER [continuing]. Unity in this country to move goods and services, and that is our focus. Thank you. I yield back.

Mr. DUNCAN. All right. Thank you very much. Mr. Nadler.

Mr. NADLER. Thank you, Mr. Chairman. As I said in the opening statement, freight projects face significant barriers in securing funding under Federal-aid Highway Programs, and the State-based system is poorly suited to fund large, critical freight transportation projects, because the benefits extend far beyond the borders of a single State, while the cost may be focused in a single area.

Moreover, given the significant backlog of maintenance and reconstruction needs facing States, freight investments, particularly large, multijurisdictional projects, are not likely to fare well in a flat-funded, State-based formula system.

So, my question is, is there a need for a strong, Federal role in advancing intermodal freight projects? And do you agree that the Federal Government is better suited for setting a strategic freight vision for the Nation, and, in some circumstances, partnering to fund intermodal freight transportation projects? Mr. Smith, Mr. Moorman?

Mr. MOORMAN. Well, we do believe, in the railroad industry, that there is a role——

Mr. NADLER. Talk into the mic, please. Yes.

Mr. MOORMAN. We do believe, in the railroad industry, that there is such a role. And you have mentioned the Corridors of Regional and National Significance program before. Our company worked with the Federal Government and the State governments on such a program, the Heartland Corridor, which will greatly reduce transit times out of the Port of Hampton Roads into the center of the country.

And I think that what needs to be done is to have these corridors identified, and they are—the corridors are all out there, clearly, to be worked on, and then to have a process in which there is public investment and private investment—and we have made significant private investment—to further those corridors. Because, as you say, they cross State lines, but they are important to the Nation.

We have other examples of that. Certainly in terms of project regional significance, I will go back to the CREATE project, which is absolutely important to the transportation of goods in this country, but really only is Chicago-centric. It just so happens a third of all rail freight passes through the city of Chicago. Our Crescent Corridor, which I mentioned, is another great example where there was, in addition to an enormous amount of Norfolk Southern money, TIGER grant money, and which helped, amongst other things, fund a terminal Memphis.

So, we very firmly believe that, as the public—as the private sector thinks about freight flows, which we think about on more than a State-by-State basis, we need to partner with the public interest to make sure that we are investing appropriately for the future.

Mr. NADLER. I will come back to that in a moment. But let me just ask now. How do we ensure that we have a well-articulated national vision for freight policy, and a program of projects underway to support and work toward a national vision?

Mr. SMITH. Well, I think it can only come from one place. It has got to come from the Secretary of Transportation. I mean that is the reason we have a Secretary of Transportation.

Mr. NADLER. Or Congress?

Mr. SMITH. Well, of course, Congress is the boss of the Secretary of Transportation, per se, along with the administration. So Congress can certainly provide an enormous amount of leadership. I mention in my remarks what I witnessed up here over a period of time when the Congress took the leadership in terms of deregulating the transportation sector, and it was hugely important. Absent that, there would not be a large amount of the economic activity that we have in the United States.

But when you start talking about the specifics of how to deal with the Southern California Corridor, or how do you deal with the area in the Metropolitan New York/New Jersey area, it requires a lot of staff expertise, a lot of particular knowledge that is resident in the Department of Transportation.

So, the Secretary of Transportation, with the Congress, it seems to me, has to develop the national policy.

Mr. NADLER. Thank you. Before my time runs out, let me ask Mr. Moorman a question. Following up what we were talking about a moment ago, freight railroads this year are planning to invest $24.5 billion in the rail networks throughout the country.

Those investments are commendable, but the Federal Government also plays a role in funding some critical freight rail projects, primarily through Projects of National and Regional Significance grant programs, and the TIGER grant program. These projects include CREATE, which we have mentioned, Alameda Corridor-East, the National Gateway Corridor, Heartland, and the Crescent Corridor. Several of these, as you well know—of these critical investments involve Norfolk Southern.

Some Members of Congress believe Federal funding should not be provided for such projects. Not an appropriate Federal role. My question is, what role has the Federal investment played in moving these projects forward, and what are the benefits of these projects that would be realized from the Federal investments, and what would happen to these projects if we weren't doing them? If—not if we weren't doing them. If the Federal Government weren't involved in them.

Mr. MOORMAN. Well, I think it is important, first of all, to say, as I said before, that in all of these projects, certainly those that our company has participated in, we understand that, as we receive benefit from these projects, it is incumbent upon us to make the investment appropriately, and that is what we do. We invest significant amounts of money, recognizing that that is appropriate when we are going to receive benefit.

But I think the more important thing, from the public's standpoint, to recognize is there are huge public benefits, as well. The Crescent Corridor, which I mentioned, is a poster child for a Project of National and Regional Significance, in that it will take a lot of truck traffic, over a million trucks a year, eventually, off some very overburdened interstates between the South and Northeast, Interstate 81 and the like.

So, I think as we move together in partnership, if we have a process, which we have had with some of the programs you mention, in which it is appropriate that there is a partnership in which the public invest, public investment is made with clearly defined and articulated public benefits, as well as private investment with those benefits to the private sector defined, and investments made proportionately, that is good transportation policy, in our view.

Mr. NADLER. Thank you. My time has expired.

Mr. DUNCAN. Thank you very much. Mr. Crawford?

Mr. CRAWFORD. Thank you, Mr. Chairman. Mr. Smith, again, congratulations on 40 years. In your testimony, you mention how critical air traffic control systems are, the safety and efficiency of your operation. How has the recent decision by the FAA to furlough air traffic controllers impacted FedEx?

Mr. SMITH. Well, the decision that was made to furlough the air traffic controllers has had a well-documented deleterious effect on air transportation in general, more the passenger carriers than us. But even so, it is adversely affecting our operations.

And, as I think probably most of the people on this panel know, the Airlines for America, which is the industry trade association which represents all of the passenger carriers as well as FedEx and UPS, the two largest cargo carriers, has filed suit to make the Department of Transportation and the FAA allocate its resources differently than has been the case or the position taken by the Department of Transportation.

And so, we will see what happens on that, but obviously, it is an enormous impediment to commerce to have these delays. Very significant.

Mr. CRAWFORD. Let me shift gears on you. Memphis has embraced their airport, and they have adopted the label of America's Aerotropolis. Can you provide some more details on how placing this emphasis on their infrastructure has affected the city? And could you see possibly the aerotropolis model being an effective plan for other cities to adopt?

Mr. SMITH. Well, the aerotropolis model was developed by a very well-known academician, Professor John Kasarda from the University of North Carolina in Chapel Hill. And Professor Kasarda studied the effects of aviation hubs on economies. And I think, in reality, it is a back-to-the-future observation. I mean Liverpool was the aerotropolis of its days in an era of sailing ships.

So, if you go to Memphis, there are thousands and thousands of employees that are employed by companies that are there to avail themselves of the FedEx Express hub, of the Norfolk Southern intermodal hub, the intersection of all of the interstate highways that connect there in Memphis. And so it is an initiative to try to look—not dissimilar to the southern California issue—at the region holistically. What are the infrastructure projects that need to be

done? What areas need to be revamped and reclaimed that might have gone to seed to promote the location of these businesses and jobs next to our distribution centers? And, specifically, our airport.

The Memphis Airport provides about 25 to 30 percent of all the jobs in the Memphis area. If you look in Atlanta with Delta's hub there, it is a huge economic engine. United in Chicago and Newark. So that is what it is all about.

Mr. CRAWFORD. Sir, thank you. Mr. Leathers, your testimony you raise some concerns over tolling existing interstate highway capacity. Could you talk about what some of the negative effects might be on your industry, and what companies like yours do to handle tolling?

Mr. LEATHERS. Sure. I mean I guess it starts with this. I mean you are here today, and I am here today, essentially in approval of raising our fuel tax and saying we believe that is the most efficient, most effective way to raise funds for the highway system.

Simply stated, when you use the existing fuel tax network, the infrastructure that already exists, the mechanics of collecting the money that already exists, about 1 cent on every dollar goes to the administration of that program. If we were to convert that, by contrast, to tolling efforts or vehicle mile traveled technologies, it is our estimation—and most studies have concurred—that it is somewhere in the neighborhood of $.23, all the way up to $.50 on the dollar goes to the administration of those efforts.

So, simply stated, as a businessperson trying to operate and invest in our own infrastructure in this country, I would like to invest in the way that is most efficient. So we are here before you saying that we are open to increased fuel taxes, which means that we are open to paying an increased tax rate, as long as those dollars, then, are turned around and invested into the very highway system that they are being raised for.

The collaboration across our different modes is, I think, much more significant than people realize already. So when we talk about congested corridors, or we talk about geographic-specific issues, I can assure you that our collective business teams work constantly to find modal conversion opportunities to, surprisingly, take trucks off the road, even though I am in the trucking business. Because the fact of the matter is there is going to be 65 percent freight growth over the next 10 years. And the only way the existing infrastructure will support it is if we work together. And if you look at our business, the three fastest growing portions of our business in our case at Werner Enterprises are our cross-border business, our port business, and our intermodal business.

And so, we are on board with it, we just would like to not see tolls as the mechanism to raise the money to invest back in the infrastructure because, frankly, folks, one thing to keep in mind is trucks have wheels, and that means they drive alternate routes. They will take alternate roads. And I don't want to see that. I don't think that is what is best for this country, I don't think it is what is best for safety. And I don't think it is what is best for the American truck driver. And we have to keep that in mind for all times.

Mr. CRAWFORD. Thank you. Yield back.

Mr. DUNCAN. Thank you very much. Ms. Brown.

Ms. BROWN. Thank you, Mr. Duncan. And before I begin, I hope that you give me my 2 minutes back. I want to reclaim them for my opening statement and my questions. So I need a total of 7 minutes, I think.

Mr. DUNCAN. You go right ahead.

Ms. BROWN. Thank you, sir.

[Laughter.]

Ms. BROWN. And let me just say I want to thank Chairmen Shuster and Rahall for putting together this task force, and I want to thank you for your leadership, Mr. Nadler. Because I think, really—and I guess I am biased, since I am the ranking member on rail—is that rail is the engine that put America to work. And I want to thank all of you all for the work that you do.

I have a lot of quick questions, and I guess I will start with Mr. Newsome. We have not passed a WRDA bill in 7 years. That is a major problem throughout. And, you know, the port, and we are getting ready for the Panamax ships, and it is a major problem. Look, it is not just the earmark part of it. The fact that we haven't passed a bill, we can't get the Army Corps to do what we need to do in just small technical things.

What is it, do you think, we need to do to move a WRDA bill? And keeping in mind when we set up that agency it was a memo directive. We tell them what projects, and we can call in the different committees and tell them what we want to see happen. Can you give me some insight as to the—what we can do, as a Member of Congress, to get out the way and move us forward?

Mr. NEWSOME. That is a good question, Congresswoman Brown. I mean we—the first 8,000 TEU container ship was built in 1999. And we sit here in 2013 looking at feasibility studies taking over 15 years for deepening projects. And I think to do this effectively, we need a strategy and a network thinking for our port system, in terms of deepening.

We have traditionally looked at harbors as individual projects without relationship to each other, and that is really a flawed way of viewing things. And perhaps the best example of that is the east coast of the United States. There is no port on the east coast of the United States that cannot succeed without the raising of the Bayonne Bridge in New Jersey, because 40 percent—40 million people live in New Jersey, and the east coast service has to go to New Jersey or New York to be successful.

So, we have got to really develop a strategic plan for our port system, network thinking. Put a capital budget aside, identify the size of the problem, and then really rack and stack with some prioritization harbor projects. We will not deepen all the harbors in this country today at Federal Government expense. And I think that is the important component in what would be different in a water resources development act this time, as opposed to one in the past.

Ms. BROWN. Just about the trust fund that is just sitting there. Can you talk about that?

Mr. NEWSOME. Well, I don't know if it is sitting there or not. I mean it is——

Ms. BROWN. Well, we use it at, like, the deficit——

Mr. NEWSOME. Well, it is——

Ms. BROWN [continuing]. So we are not using it where it needs to be.

Mr. NEWSOME. Yes, ma'am. So I think we have to make some definition of terminology here. There is harbor maintenance, which is funded by the Harbor Maintenance Trust Fund, and there is a plan behind that. The unfortunate part of that story is that only half the Harbor Maintenance Trust Fund collections are spent on harbor maintenance. The rest of the fund vaporizes into other uses.

On the other hand, we have the need to deepen harbors, certain harbors. Not all harbors, but some harbors need to be deepened. There is infrastructure in other harbors: Gerald Desmond Bridge in California, the Bayonne Bridge, needs to be addressed. So they have to be addressed differently.

I think the operating maintenance of harbors has done pretty well. There is a plan behind it, more money needs to be spent on it, because there is a deficit everywhere.

On the deepening side, there is really no strategic plan, there is no allocation of a capital budget, what I would call a capital budget, in the private sector. Maybe that is $10 billion, $20 billion, whatever. So this is the amount of money, these are the meritorious projects. We are going to rank them, in terms of cost and benefit, and in terms of providing the requisite capability. There is no sense to deepening a harbor that is not going to be able to handle an 8,000 TEU container ship. It doesn't make sense.

Ms. BROWN. That is right, absolutely.

Mr. Moorman, let me ask you a question. The RIF loan program. We have been—Mr. Shuster and I and many of the Members would like to not fix it, but make it more useable. You know how long it takes to apply for it. And how do you think improving that program would help the infrastructure and the localities working together to improve the infrastructure? Because we do need additional revenue coming into the system.

Mr. MOORMAN. The RIF loan program, as you say, has not been used extensively for any number of reasons. I would say that from the perspective of the Class I railroads, we always have availability of funding, and we are able to borrow, we all are very solid credit metrics. So it is less of an issue to us.

And, of course, as you know, we have been spending an enormous amount of money on infrastructure enhancement and infrastructure maintenance. And one thing I would tell the panel is that you hear a lot about America's crumbling transportation infrastructure sometimes, and a lot of it is hyperbole. I will tell you that the rail freight network, physically, is in the best condition it has been in—certainly in the last 50 years. And that is because of the money we have spent.

I think that in terms of the RIF program and its usability, there are clearly cases where, if those funds are available, there will be railroads that will want to use them. Probably not so much the big Class I's, but then the smaller railroads. If there is a way to make it more usable, it might even ultimately be attracted to us. But, as you say, it is going to have to be changed in some ways to make it more user-friendly before we would have any interest at all.

Ms. BROWN. I guess my last question, this committee used to be one of the most bipartisan committees in the House of Representa-

tives the entire time I have been here. We have a major shortfall with revenue. And what would you all, each one of you, do to recommend what we can do to get the—you said it is not a major issue, but the Association of Engineers give the United States a D-minus as far as bridges and infrastructure and the things that we need to do and the investments we need to make to put America back to being number one, as far as, you know, our competitors and moving forward. And I start with Mr. Smith.

Mr. SMITH. Well, the most important thing is, as Mr. Leathers said, is to increase the fuel tax back up to an appropriate level. It has been allowed to——

Ms. BROWN. Is that a tax you are talking about, or just revenue enhancement? What would you call it?

Mr. SMITH. Tax.

[Laughter.]

Ms. BROWN. See, my colleagues, they are—you know, they can't stand that word, tax.

Mr. SMITH. Well, I—the—as I mentioned in my remarks, the combination of the leadership of the Congress in deregulating transportation and the funding mechanism that was put in place to build our transportation infrastructure was very important to the economic prosperity of this country.

Beginning in the middle part of the 1990s, the primary funding mechanism for the highway system has been allowed to atrophy. And it is particularly unfortunate, because we have had enormous improvements in efficiency, in terms of both miles per gallon of both private automobiles and the equipment that we all operate. So, the net effect on the traveling public, or the shipping public, is not unmanageable.

So that is the easiest, quickest, most effective way to solve the problem, is to put in a fuel tax to fund improvements. And then, on the aviation side of the house, there are already mechanisms there to do the same thing. But you can't wish these things will happen; they have got to have the money to fund them.

Ms. BROWN. Thank you. Mr.——

Mr. MOORMAN. I agree with everything that has been said by the panel, in terms of you are going to have to have more revenue. This is no longer a question of when people can just say, well, the Government is somehow inefficient in maintaining the highway system. We are at the point where we are approaching a crisis. The Interstate Highway System was designed with a 50-year life, and it was built about 50 years ago.

So, unless something is done to bring in more revenue, we are going to continue to go downhill. And I think the panel is quite right in saying the most effective and efficient and quickest way to do that is through the current mechanism, which is user fees in the form of gasoline and fuel tax.

Mr. LEATHERS. We think fuel taxes are the quickest, most readily available way to raise revenues and provide revenues. And the only caveat would be with the specific and intended use for the infrastructure of the United States; for the highway system and the freight system of the United States. Not for alternative uses, not for diversions to other projects, but for the intended use. We, as an industry, are willing and able to subject ourself to a higher tax

with that private-public partnership and agreement that that is where the money goes.

Ms. BROWN. OK.

Mr. NEWSOME. I may have covered a—I mean we have to recognize that maintenance and deepening are different, and we have to look at them accordingly. And I think we have to see that the Army Corps of Engineers has made a lot of progress recently in terms of shortening the timeframe to do projects, and going down the road to making some or identifying some priorities. And we have to be comfortable with that. I think they are very effective in doing so, and we have to move the projects faster.

Mr. WYTKIND. Thank you, Ms. Brown. I agree with what has been said. The Harbor Maintenance Tax funds have to be reformed with a bipartisan bill. I agree with Mr. Newsome, that we need to get the deepening of our channels funds into the system, and get the process streamlined so it doesn't take half-a-generation to get it done.

We think the fuel tax needs to be raised. We have had that position for many years. It is the purest form of a user-fee-based system. If you use the system, you pay a fair share, and it is the way to do it.

And I think we can't lose sight of the fact that our aviation system continues to operate under fits and starts of funding. And those trust funds are in trouble, too. And we subject the agency to these Washington-like fights that you only see in Washington that makes them start, stop, start, and stop. And then things that Mr. Smith and others care about, and flying airplanes in the sky, they don't get done. And when they do, they get done too slowly.

Ms. BROWN. Thank you, Mr. Duncan. Thank you.

Mr. DUNCAN. Well, thank you, Ms. Brown. I let your part go 11½ minutes.

[Laughter.]

Mr. DUNCAN. Corrine and I are long-time friends. I have seen her get mad in here before, but she has never gotten mad at me, I don't think. I hope to keep it that way.

[Laughter.]

Mr. DUNCAN. Mr. Hanna?

Mr. HANNA. Thank you, Chairman. Thank you all for being here.

The elephant in the room that people just spoke about is how do we pay for all this? I come from New York, one of the highest gas-tax States in the country. We pay sales tax on every gallon. And it is a real issue, with all the economic issues that New York has, otherwise, and, of course, the country at large. But yet the ATA, I think to their credit, has been consistent in their desire to have their own taxes raised.

However, Mr. Moorman from the railroad side may say that they don't want their taxes raised enough. I believe you are about $.15, Mr. Leathers, is that correct? That is roughly what you would like to see the diesel tax raised?

Mr. LEATHERS. Yes, roughly.

Mr. HANNA. Roughly $.15?

Mr. LEATHERS. Indexed to something.

Mr. HANNA. So, we all want our taxes raised. Mr. Wytkind is comfortable having taxes raised on your very, very large member,

taxes which will affect each and every one of those members, and I understand that.

Mr. Smith is comfortable having taxes raised on every gallon of gasoline that he buys. And I mean we have unanimity there.

Yet in Congress, we seem to have a real problem even breaching the subject. We have an efficient system that has worked in the past that—and to be honest, we have had a Democratic administration where all three branches were held by a Democratic side, and yet we were unable to raise taxes. And, of course, you know the dynamics now in Congress are so much different it is even—it seems more difficult now than ever to do that.

So, do you think a—vehicle mileage use traveled is a particularly onerous thing. We don't have a way—a mechanism to do it right now. So in the short run—and I will get to a question—is there a way for—that any of you think about that could allow us to include CPI and CAFE standards, in terms of raising the gas tax, if that is where we wind up? And apparently we have unanimity on that.

And for Mr. Moorman, specifically, to level what you would call the playing field, how much would you like Mr. Leathers' taxes raised?

[Laughter.]

Mr. MOORMAN. I love Mr. Leathers, but substantially.

[Laughter.]

Mr. MOORMAN. Let me address that point specifically, though. As I think most of you on the panel know, there have been any number of studies in the past that show that in terms of the amount of wear and tear that large trucks cause to our highways, they pay—while they certainly pay fuel taxes, the amount they pay is disproportionately low, compared to the damage they do to their highways. And we certainly strongly advocate that there should be a level playing field.

And so, in that regard, the committee—the T&I Committee has now commissioned another study to look at the impact of not only current truck size and weights, but the proposals that have been made for even more significant truck size and weights. That report is due out, I believe, next year. And if it shows what, as I say, most studies have shown before, it would indicate that diesel highway fuel taxes should certainly be higher. And in the case of heavier trucks, substantially higher. We will see where that study goes.

And I am not coming in here to advocate that you should raise Mr. Leathers' taxes today. We work in partnership, as he has said, with a lot of trucking companies, and—because rail and highway together make a better solution in many situations. But in the future, all we advocate is a level playing field.

Mr. HANNA. So it is safe to say we have unanimity on raising taxes for gas, largely because it is a system we have, it costs 1 percent to raise, and everyone here understands—and, Mr. Newsome, you mentioned you would like to have a tax raised user fee on harbor fees, and I understand that. So I just wanted to get everybody—have everybody a chance—get a chance to say that.

Mr. Leathers, maybe you would like to respond, though. Because I have heard $.95, Mr. Moorman.

Mr. MOORMAN. It is probably a little low, but go ahead.

[Laughter.]

Mr. LEATHERS. A couple of things. I think the issue of indexing is going to be important, and something we will have to study to come up with the right index over time. What we don't want to do is have an index as it relates to fuel tax that is volatile, which causes volatility, ultimately, in the economy. Because as we fuel our trucks and have those costs, if that index is moving violently, it has downstream unintended consequences. But we do think it should be indexed.

So, whether that is a CPI Index or, as you mentioned, a CAFE Index—the CAFE one concerns us a little, just in terms of the fact that there are jump moments in that index that would then translate to sudden and abrupt changes in the tax.

As for whether we do or don't pay our fair share, I think that will be much to be debated. In the meantime, what I do know is that over 70 percent of everything delivered to every American in this country is delivered by truck. So whatever wear and tear we may cause is probably wear and tear that people are proud to have us do so they can have the goods and services they enjoy every day.

So we will continue to work with the rail, and we will continue to work within our modal solutions on longer length of hauls. But at the end of the day, unless we are going to put rail tracks behind our homes and businesses or dig canals for barges, I suggest that we continue to focus at the task at hand, which is how do we invest in the American infrastructure so we can deliver the goods and services to its people.

Mr. HANNA. Thank you. I yield back.

Mr. DUNCAN. You wanted to add something, Mr. Newsome?

Mr. NEWSOME. I was just going to say the port situation maybe is a bit different. On the one hand we have got a significant bucket of money, all of which is not spent on maintenance of harbors. On the other hand, we have got this need to deepen harbors, and there is no predictable way to determine how that is going to be funded. So we have got, really, two different issues, and they are separate and distinct.

I think the good news is that ports are now visible. The Obama administration has moved that forward with the "We Can't Wait" initiative. But now we have got to find out how to authorize deepening, and how and what money is going to be appropriated for it.

Mr. WYTKIND. Mr. Duncan, if I could add one point?

Mr. DUNCAN. Yes, sir.

Mr. WYTKIND. I think, Mr. Hanna, you make a lot of very important points. But one of the things that is lost is at the State level, in the absence of Federal leadership, these initiatives to raise transportation revenues are passing. The vast majority are passing. The voters are voting for them, which is the purest form of democracy. You put a proposal on the table, you put it on a ballot, and you vote for it.

And so I think the voters are actually further along than I think a lot of Members of Congress realize. It is just not translating into action in Washington, and I think that is one of the big problems we have.

Mr. DUNCAN. All right. Thank you very much. Mr. Lipinski.

Mr. LIPINSKI. Thank you, Mr. Chairman. Mr. Wytkind, if—I think there is a lot of things we can look at and say that it is not translating to action in Washington that we should be doing.

I want to apologizing having to jump in and out of this hearing—I am the ranking member on a subcommittee that was having a hearing—because I want to emphasize that I think that this is a very important panel, it is a very smart thing that has been done to—the chairman and ranking member did to put together this panel, because we really need to examine freight across all modes, since we all know that freight is multimodal. And having Chairman Duncan to lead us, and Ranking Member Nadler also, is—I think we are going to have a very successful panel here. And I thank all of our witnesses for your input today.

I am glad that Mr. Smith and Mr. Wytkind mentioned NextGen. I think that is critically important. And hopefully we won't lose that in—on this panel here, to mention NextGen and how we can more efficiently get NextGen moving along, because it has been fits and starts with NextGen.

Also, something else I want to mention is our inland waterways. I want to make sure that those are not forgotten and lost on this panel.

I want to ask Mr. Moorman a couple of questions. I would—I was trying to figure out some way that we can work our love of cycling into this, but I don't think we move much freight on bikes here in this country, fortunately.

But I want to look at talking again about CREATE. I mentioned how important it is to northeast Illinois and to the entire country. I enjoyed working with you over the years to advance the program, where there is about $1.3 billion in Federal, State, local, and private dollars that have been invested so far into projects in CREATE. As you know, we still have a long way to go to see the program through to its completion.

I would like to ask Mr. Moorman if you could describe what northeast Illinois means for Norfolk Southern, specifically, and why you believe CREATE is important, from a national perspective?

Mr. MOORMAN. Thank you, Congressman. And I will say that we don't haul a lot by cycle, either, but we still enjoy it.

As I mentioned earlier, approximately a third of all rail freight that moves in this Nation moves through Chicago. And that is because, historically, the infrastructure was routed that way. So it is absolutely critically important. It is the single most important point in the North American rail network. And I can tell you that when things don't go well in Chicago—an example being the blizzard that we experienced up there, all of the freight rail networks start to slow down. It is just that simple.

If you look at our operations into Chicago, it is our single most important link. We run about 100 freight trains a day in and out of Chicago. And once you get into Chicago, because it is infrastructure that was built over a long period of time accretively, the routes are not particularly efficient. And there is a lot of work that needs to be done.

Now, at the same time, that inefficiency of moving traffic through Chicago results in significant delays to the community because of grade crossing congestion. And it presents serious prob-

lems for Metro. So it is, of all of the things that—and all the locations that matter not only to Norfolk Southern, but to the North American rail network, Chicago is always number one. And that is the significance of CREATE.

And you mentioned that you were talking to this subcommittee about going to look at Chicago. It is something I would encourage at some point, just to get an idea of the scale and the scope, and how complex the rail network is there.

Mr. LIPINSKI. Thank you. It is something that I think people need to see in order to understand, the issues there. I mean we are looking at at least $1.9 billion, maybe more, to complete CREATE right now. I think that it is not just CREATE, there are a lot of choke points in Chicago no matter what mode that we are talking about. We talk about choking in Chicago, it's not just the Cubs.

[Laughter.]

Mr. LIPINSKI. It is rail—I am a Cubs fan, I can say that, even though I am a Southsider—rail, freight, the roads, road network, we talk about aviation. So that is very important. And I think the project, as—Mr. Nadler has been a champion of this—I think the Projects of National and Regional Significance, having that funding mechanism available is critical for these problems across the country, so that we can look comprehensively and act comprehensively on some of these choke points that occur across the country.

But my time is up. There is a lot more I could go into here, but I am going to yield back.

Mr. DUNCAN. Thank you very much. Mr. Webster.

Mr. WEBSTER. Thank you, Mr. Chairman. Thanks for doing this panel. And it is a very important thing to our economy and to our growth of this economy, is infrastructure. And we certainly appreciate all of you coming today.

I had a question about something that—it is not to Mr. Leathers, but he said that—which I think he said correctly—that the trucking industry doesn't have the ability to determine their right of ways or access. They basically are determined by the building of roads, and then they run on those roads. But I heard you mention a couple of times, Mr. Moorman, about the—I think it is the Crescent Corridor. Could you tell me—because I am not familiar with how this takes place—how did you determine the—how was that determined, as far as developing that corridor? Is it a partnership with Government, or can you do it on your own?

Mr. MOORMAN. Thank you, Mr. Webster. I noticed, by the way. Are you a Georgia Tech graduate?

Mr. WEBSTER. I am. I am an engineer.

Mr. MOORMAN. Good. I love the Yellow Jackets, how about you?

So the Crescent Corridor was identified primarily as we started to look across our network and started to see on the highway system an enormous amount of freight flow traffic, 5 to 6 million trucks a year, which essentially move from the South and the Southwest, up into New York, New Jersey, New England. And it was the largest such freight corridor which has never really had effective rail intermodal service. But it matches up very well to our routes.

So, we started to develop a plan to start to add terminals, such as the one at Memphis, one at Birmingham, several in Pennsyl-

vania, to add infrastructure, in terms of capacity, and to enable us to run higher speeds, to be able to provide service to folks like Mr. Leathers and his customers that would be competitive with the truck and offer a better economic solution.

Our—it took us a lot of planning. And where the Federal dollars made a lot of difference for us—although most of the investment is ours—is it allowed us to accelerate a lot of projects that we might have done over a 10- or 12-year period, but instead we could do them in 3 or 4 and realize those public benefits, as well as the private benefits, much faster. The Crescent Corridor has about $2 billion in public benefit built in, which has been very carefully analyzed by outside agencies.

So it was the culmination of a big project on our part. But as we approached both Federal officials and State officials and told them what we were doing, and told them the impact it would have on highways like Interstate 81, it was enthusiastically embraced by a lot of people.

Mr. WEBSTER. Well, I guess, then, was there a necessity to acquire new right-of-way?

Mr. MOORMAN. Only in very limited instances where we might have to expand from one track to two. It was essentially our existing infrastructure, but a lot of money spent to enhance it.

Mr. WEBSTER. Do you—is there condemnation rights that are vested in someone, maybe even the Government? Or how does that work?

Mr. MOORMAN. The railroads do have—historically, have always had condemnation rights for rights of way. But it is something we employ very, very rarely. And to my knowledge, did not ever employ in this corridor.

Mr. WEBSTER. So this basically followed an existing corridor, except it was just expansion or rail improvements, or——

Mr. MOORMAN. Exactly, exactly. And the good thing, from the Norfolk Southern standpoint, is our route structure really matched the freight flows.

Mr. WEBSTER. Great. Mr. Chairman, I would like to at least make one comment about Florida. We very strategically use tolls to produce an expanded, limited-access highway system. And we have chosen to do that, and it has been very effective. As far as the cost, I don't think it gets into the $.20 to $.50 for every dollar. It doesn't. It is—and I know this, that every dime that is collected goes back into transportation projects. We have a long turnpike enterprise system, which is over 600 miles. We have another 150 miles in a local—in several areas, including Tampa, Orlando, Miami-Dade County have toll systems.

And we have just recently, in the last several years—I think they started off as Lexus Lanes then they were called Taurus Lanes, and now they are Price Management Lanes to make the—maybe mitigate the fact that everybody can use them. But they are used—they are basically a—we use them from Miami up to Fort Lauderdale on I–95 for—in a sense they are price management, in that the tolls collected are varying tolls, depending on how much better the traffic is flowing on those lanes, versus the other.

I could contend that that, more than anything, is a user-pay system that works. I understand gas tax. We have a supercharged—

maybe it is a turbo tax—turbo tax system in Florida, where our gas tax is indexed. But for the most part, most of our new roads have been built by toll. And I would commend that to this committee.

Mr. DUNCAN. Well, thank you very much, Mr. Webster. I remember when you were speaker of the house in Florida, and you certainly saw things from a statewide basis. But while you were making those comments, I remembered the comment from my friend, Joe Scarborough, when we were doing the highway bill. He told Bud Shuster that he wouldn't want any highway money, even if they built the Joe Scarborough Memorial Highway clear from Pensacola to Miami. And I told Chairman Shuster that, "You give me his money, then." I would take it.

[Laughter.]

Mr. DUNCAN. Mr. Sires.

Mr. SIRES. Thank you again to the panelists. This has been very informative.

I was just wondering. For those people that move freight internationally, do you and your customers see a large difference between the U.S. infrastructure and that of the—of your international trading partners? And where are the gaps, if there are gaps?

Mr. SMITH. Well, I think it varies around the world. If you go to China, they have a fantastic infrastructure of airports and ports and rail that have been put in place in the last 30 years. In Europe, it varies from country to country. I think the European subsidization of passenger rail systems and all makes it so it is hard to compare with the United States.

But our transportation system, up until the last decade or so, I think, was a model for the world. The problem is it has been allowed to atrophy. We were spending, in the 1960s, about 4 percent of GDP on infrastructure. We are down to 1 percent now, and as been mentioned several times during this hearing, it is very difficult to simply raise the fuel tax on an inflation-adjusted basis, back to where it was in 1994, despite the fact that the fuel efficiency of personal automobiles and over-the-road vehicles and all is significantly greater. And I think the reason for that, quite frankly, is that we have had a vast increase in fuel taxes that have been imposed by OPEC, by the price of fuel. So people are very sensitive to the fact that today they are paying, you know, close to $4 a gallon, $3.50, and when we started this decade they were paying less than a fifth of that.

FedEx Express, I remember in the spring of 2001, was paying $.67 for a gallon of jet fuel. And today it is $3.30, $3.40, something. You know, it is not a little bit. It is five times. So the average family in the United States is now paying between $2,500 and $3,000 more for gasoline per year than they were 10 years ago. That is why you have had such a hard time, it seems to me, increasing the gasoline tax, because it just adds to that.

But it still doesn't mitigate the fact that our infrastructure is aging, and our entire economy, as Chairman Duncan said in his opening remarks, you know, depends on this transportation and logistics infrastructure. And we either fix it, improve it, modernize it, and expand it, or we will have a lower standard of living and

a lower national income. That is just absolutely 100 percent predictable.

Mr. SIRES. Well, thank you very much. I am glad—I have a few minutes, so I just want to talk a little about your comments. You know, I know that you mentioned that you spent $300 million, your authority, to deepen in the ports. Was that the right amount?

Mr. NEWSOME. We haven't spent it yet, Congressman, we put it aside in an account with the anticipation of spending it on our deepening project.

Mr. SIRES. But, obviously, there is no help. And you have to put the money aside and the people of South Carolina have to pay for that.

Mr. NEWSOME. That is correct. I would say we are probably the only port and State that has done that. And we do that simply out of the uncertainty of funding for a very strategic project for our State.

Mr. SIRES. OK. What I am getting at is that I do believe the Government has to—you know, has a role to participate in some of these areas, because some of the best jobs that we have in this country comes from the ports. And I think the freight is going to grow enough where it is not just the Port of Newark or the Port of Elizabeth, but all the ports on the east coast are going to be able to take advantage of the growth that is coming in the future.

Unfortunately, we don't participate, as a Government. So, therefore, it is the people who eventually wind up paying for it. The reason I say that is because in New Jersey, you know, you talk about the Bayonne Bridge. Surely we were able to get the Port Authority to put the $1 billion that is needed to raise the port, the bridge, which impacts about 250,000 jobs in the region, all jobs related to the port. But, again, at a cost.

You know, you try to go through the Lincoln Tunnel today into New York, it is like $13, and it is going to go into, I think, $14 or $15, because somebody has to pay for the ports—for the ships to be able to go through the ports to keep those good-paying jobs in New Jersey. And I always—I remind you there was a gray billboard going into the Lincoln Tunnel and it was put together by the people who do park-and-ride. And the billboard read, "President Lincoln. Great President, Lousy Tunnel."

[Laughter.]

Mr. SIRES. OK? The reason being is that, you know, you go into New York City, and you have to pay this expense. And we are now working on another tunnel, supposedly the Allied Tunnel, to move freight. But all that stuff, if we don't participate as a Government, all those good jobs are going to be impacted because, you know, it has got to come from someplace.

Mr. NEWSOME. Well, Mr. Sires, they are Federal harbors. And it is not correct that the people of the State of South Carolina have to pay the entire cost for deepening. And we hope that is not the case. We are optimistic with what we see happening in the activities of this committee, that it will somehow not be the case.

Mr. SIRES. How many jobs, good-paying jobs, are related to the ports?

Mr. NEWSOME. In South Carolina, direct and indirect jobs, about 1 out of every 10 jobs in the State are related to——

Mr. SIRES. Incredible. And if you don't deepen, you know, these big ships coming through the canal now are not going to be able to dock in South Carolina.

Mr. NEWSOME. We have to deepen. And it is not—it is a regional priority. There are four ports within 400 nautical miles. We are not in big cities like Los Angeles or New York. And they serve an entire region, the fastest-growing region in this country, the Southeast, and we need a 50-foot harbor. It is a priority, because four other harbors are already authorized to be at that depth today.

Mr. SIRES. Thank you, Mr. Chairman.

Mr. DUNCAN. Well, thank you, Mr. Sires. I think it is—I have been told that 42 percent of the House, I think it is, is new, just in the last 2 elections. But the only representative we have of this year's freshman class, a large freshman class, is Mr. Mullin. Mr. Mullin, you may begin.

Mr. MULLIN. Thank you, Chairman. And I do like the opportunity to speak to everyone and tell you thank you.

It is a frustrating thing, as a business owner. We have not near the size of fleets that you have, but in Oklahoma we run about 80-plus trucks every day on the road, my company, which is my wife and I's. And the frustration, the lack of common sense that we see that comes out of this place all the time is literally what drove me here.

And so, for this panel to be put together—when Chairman Shuster said that he was putting this panel together, we jumped at the opportunity, knowing that we were still a little wet behind the ears. But we were welcomed by the chairman to join the panel. And to see that we are bringing in the industry leaders and actually listening—what I hope we do is actually take your advice, too. Because for politicians to think that we are going to fix the infrastructure is an absolute joke. We have to take the suggestions of those that are sitting in front of us.

And so, thank you for taking your time. And I do want you to know it is not a waste of your time, that you are sitting in front of us today. I truly believe this panel of 11 has the interest. You can tell that most of us all agree that we have got to do something with our infrastructure. The infrastructure is the backbone of our economy. It is how we get around. At the same time, it is one of our biggest expenses, too. When we drive on roads that beat our trucks up, we have got to repair them. It slows us down, and it slows our production down, too. So, with that being said, thank you. Thank you so much.

Seventy percent of Oklahoma's freight actually travels through the State, 70 percent of it. We are the center of the country. And it is vitally important that we invest in the infrastructure getting around it. So at the same time we have one of the largest, if not the largest, inland water ports in Catoosa, which is in our district. The chairman had the opportunity to come—Chairman Shuster had the opportunity to come visit it Friday. And he literally made a comment of, "This is in Oklahoma?"

And I said, "Yes, it is right here," because it doesn't look like it belongs in Oklahoma. But we have invested in the infrastructure, or the generations ahead of us saw the future. And what you guys are suggesting is part of the future, too.

And I have a couple questions for Mr. Smith, first of all. In your statement you said you was wanting to increase your tandem trucks from 28 to 33 feet. Is that correct? What type of increase would you see, as far as the number of trucks you would see coming off the road in your production that you would build, the efficiency that you would build to deliver the products?

Mr. SMITH. Well, as I mentioned, Congressman, the parcel and the LTL business, the less-than-truckload business, which are both network businesses, as opposed to the truckload business, which is more point-to-point, pick up in one——

Mr. MULLIN. Right.

Mr. SMITH [continuing]. Location and deliver it to another location. The problem in the less-than-truckload and the ground parcel business, where we are represented with FedEx Ground and FedEx Freight, is that you cube out long before you weight out.

In the truckload business, depending on the type of commodity that you are carrying, you may well have a truck that is very heavy.

Mr. MULLIN. Right.

Mr. SMITH. But in the parcel business, and in the LTL business, you are way underutilizing the pulling power of the vehicle. So it is about an 18-percent pickup in productivity.

And over time, you would have roughly 18 percent fewer vehicles that are involved in LTL and ground parcel in over-the-road transportation by making that one change. They are safer. We have tested them in Florida and so forth. We have had, I think it was, the University of Michigan look at it. They are more stable. And so, with fewer vehicles on the road you burn less fuel, fewer emissions, and you have a safer operation.

Now, the reality, the way the transportation system is evolving, is truckload transportation built around the 53-foot unit is the standard unit, as well, for intermodal. And Mr. Moorman was kind enough to put that picture of the FedEx PUPs up there, the 28-footers. But in reality, the majority of our rail transport are 53-foot trailer-on-flat-cars. And over a period of time, I am very confident they will transition to containers, because they are more efficient for the rail transportation.

So, we would say that one of the simplest ways to improve the Nation's productivity is simply go to a 33-foot PUP standard and keep the 53-foot truckload intermodal standard.

Mr. MULLIN. That is a commonsense approach, and I do appreciate it. And Chairman Shuster pointed out to me one time, though, that common sense is a rarity and doesn't belong in D.C. But hopefully we can bring that on.

Mr. Leathers, you had made mention about the weight increase. What is it that you would like to see the weight increase to from where it is at to where you would like to go? And is there a stopping concern?

Mr. LEATHERS. Well, first off, let me state that at our organization we may be unique in the sense that we are a truckload carrier that goes from A to B, as Mr. Smith just indicated, but we also cube out before we weigh out about 80 percent of the time. So one in five of my customers would have a benefit for a heavier weight.

My position on it, though, is that we ought to allow, as technology has continued to advance—and, for instance, our current truck spec has the same stopping distance—the trucks we were bringing into our fleet today has the exact same stopping distance at 88,000 pounds on five axles that it did in the past, or historically, with 80,000 pounds over five axles.

So, when I made the comment that I think there ought to be exceptions and States should be given the authority for longer dimensional vehicles as Mr. Smith has requested, or where appropriate, heavier weight vehicles, where the application is designed appropriately, that is really what we are speaking to.

I will tell you in my own network, in my own organization, it would not be something that would benefit us. But I think the purpose of the panel is to talk about it in broader terms than that.

Mr. MULLIN. Mr. Chairman, if I could quickly say just one more thing to the panel—and I am sorry about taking time here—but would you prefer to see a flat tax increase, or a percentage increase? And just quickly, you guys can either—I don't really care who starts with that.

Mr. WYTKIND. I might. We have taken the position that both options would be fine, although we have said straight flat-tax increase. But I do think indexing is important. I agree with my fellow panel members, getting it indexed, so we don't have to keep falling behind, the way we are. We are now at our 1993 budget in 2013.

Mr. MULLIN. Right. Everybody agree with that? Thank you. Appreciate your time, thank you.

Mr. DUNCAN. Thank you very much, Mr. Mullin.

Mr. SMITH. Mr. Chairman, could I?

Mr. DUNCAN. Yes, sir.

Mr. SMITH. Congressman Mullin, I just had a note here that the effect of going to 33 foot, in our ground and freight operations, would take 600,000 truck trips per year off the road.

Mr. MULLIN. Wow.

Mr. DUNCAN. All right.

Mr. MULLIN. Thank you.

Mr. DUNCAN. Thank you very much. We always try to save the best for last, Ms. Hahn.

Ms. HAHN. Thank you, Mr. Chairman. Thank you for hanging around, you and Ranking Member Nadler, with me.

This has been, really, a fascinating discussion. I am again so pleased that I am able to be on this panel, as I do think we are going to be able to create a national freight policy that is common sense, but really begins to address this issue like we never have before.

Being the last person, obviously most of my questions were already asked and answered. I do just want to say again how pleased I am that we are talking about the Harbor Maintenance Trust Fund. I just think that is a problem in search of a solution. There is $9 billion that is surplus that is not being used for the intended purposes.

And again, I think when we collect a tax, as was said, I think people—and the industry is OK with that, as long as we continue to use the tax for the purpose it was intended for. And I think we

really lose the public's trust when we continue to ask for taxes, raise taxes, and don't use them for the intended purpose.

L.A./Long Beach, of course, is the donor port in that Harbor Maintenance Tax. We only get .1 percent back of what we give. And maybe for another topic I would really like to do a deep dive into the Harbor Maintenance Trust Fund, and talk about are we willing—are we ready to achieve some sort of equity? I would like to see that money go back to the ports where it was collected. I know, though, the smaller ports in the country are nervous about that solution, because many of them are on the receiving end of that tax. So I really don't feel like we have the time here to deep dive into that.

One of the things I have not heard us talk about today, which I do think is a—is going to be a problem that we need to address, and that is the environmental impacts of our expanded transportation projects and initiatives. And wondering if that is something that we need to actually look at and address in a commonsense way when we come up with a national freight policy.

I know in Los Angeles, in Long Beach, we have had to address environmental mitigation as we have grown our ports. We do have the Clean Truck program. We are now expanding the ships' ability to plug into shoreside power in our port. We have an intermodal project, BNSF, that I fear is—will be held up because of the environmental impacts of that project, even though it is a good project, it makes sense, it is going to help our transportation system. You know, unless we address the impact that we are going to have on neighborhoods, I think many of our projects that we are going to talk about may be stalled until they are better.

Curious to know. Are we moving towards cleaner, greener fleets with FedEx or rail? Are we closer to any kind of real cleaning or electrifying of our trains, our trucks? I know we are not close to having an electric drive system that actually can work for a long haul. But where are we, and should we, as we talk about a national freight policy, should we address this in a proactive way so that any kind of expansions or, you know, more investment in infrastructure projects, we address this at the same time so as not to have a conflict with environmental mitigation? I would like to hear all of your comments on that.

Mr. SMITH. Well, I will start and simply say that the easiest and best way to reduce emissions and pollutions is through, one, making our transportation infrastructure more efficient. Everything that we have talked about today, Next Generation air transportation, corridor improvements, infrastructure funding by increased fuel taxes, as long as that money is spent on infrastructure, it will reduce the number of vehicles or activities, and there will be a commensurate reduction in emissions. It just follows one to the other.

As I mentioned, in FedEx Ground and FedEx Freight, just by making the change in the twins to a 33-foot limit takes in our company alone 600,000 trips. So it is a fantastic improvement.

The second is technology is allowing us to do what we do more efficiently. We are buying new 777 airplanes, 18 percent more efficient than the airplanes that they replace. Our new lighter pickup and delivery vans for FedEx Express are almost 40 percent more efficient. The quickest way for the Congress to reduce emissions in

the transportation sector is to change the corporate tax rate and make it more advantageous to invest in capital assets in the United States and modernize them.

Those two things, you don't have to worry about efficiency and emissions, you know, getting better. They will happen as a natural coefficient of what you have done.

Ms. HAHN. Well, we found that to be true in the Alameda Corridor. We got rid of 200 grade—at-grade crossings. And what started out to be just an efficient way to move cargo turned into being an incredibly environmentally sound project that reduced emissions with cars, of course, waiting for—at the at-grade separations. So thank you for that.

Yes, I would like to hear from the rest of you.

Mr. MOORMAN. Let me go very quickly. There is an enormous amount—and I concur with everything Mr. Smith said. There is an enormous amount the rail industry is doing, in terms of reducing emissions. We already have a approximately threefold advantage, in terms of fuel efficiency versus the long-distance highway transportation. So we are generally viewed as the cleaner form of transportation. But we have—in addition to that, we have got lots of programs to reduce emissions and increase fuel efficiency all over.

The other point I would build on, though, in terms of what you can do, and what the Congress can do, is that all of us at this panel, I know, believe in being good corporate citizens and good environmental stewards. But one of the things that happens—and you pointed out a great example of it—is that quite often there are very good projects out there with significant environmental, as well as economic, benefits that just get snarled up in layers and layers of not only Federal regulation, but State and local regulation, and can add years and years to the time when we can accomplish these projects and realize the benefits.

And to the extent that this panel thinks about that, and thinks about how we can streamline processes to get a lot of this important work done, I think that is an important thing to keep under consideration.

Mr. LEATHERS. I also will try to be brief. I echo the sentiments. The single biggest thing I think we can do to positive impact the environment is to take away the congestion that otherwise results from inaction.

There was an A&M study in 2011 that said the cost of congestion on our Nation's highways was $121 billion. Trucks bore the brunt of that in the term of $29 billion. But the real issue is as those trucks are—and cars and other vehicles are congested, is the emissions and pollutants and environmental impact that may happen.

As for our industry, we have invested heavily. We have reduced the particulate as well as NOx emissions of the Next Generation trucks that we now run by 90 percent over the last 5 years. And so, one of the untold stories is that the average truck going down the road today, you would need 60 of them to have the same emissions as one truck would have had in 1985. So tremendous progress has been made, and we are going to continue to go down that path. But eliminating congestion and allowing us an environment whereby we can invest with a better tax structure, so that we can invest in alternative technologies as they come available, would be huge.

We are experimenting with natural gas, both compressed natural gas and L&G liquified natural gas. But in both cases it is a very expensive technology. And so, having appropriate tax environment that allows us to take those risks would be beneficial, as well. And we will continue our part, you know, in our organization. You know, we have eliminated 860,000 tons of carbon emissions, just in the last 5 years, through some of these techniques, and we are going to continue to do so. But it is really an industrywide effort to try to run cleaner and safer at all times.

Mr. NEWSOME. The international and domestic container shipping industry, I think, has been on the forefront of environmental efficiency. The very building of large ships is environmentally efficient. We are going to carry more cargo on the same number of ships, accommodating our growth in much more fuel and environmentally efficient ships.

You mentioned shore power. I think the main benefit in harbors is going to be from the North American Emission Control Area, which was implemented in the U.S. in August, and will ultimately reduce sulphur content and maritime diesel fuel from about 4 percent to .1 percent by 2015. So it is a dramatic reduction across all ships in the harbor.

We have a Puerto Rico carrier that is building L&G ships today. And I think the ports have stepped up to the plate, in terms of retrofitting engines, more efficient diesel engines, electrifying cranes, and, in our case, even funding a truck replacement for the oldest of diesel trucks.

Mr. WYTKIND. If I might add one small comment, first of all, NextGen in the aviation system has proven to cut fuel consumption, and will reduce the footprint of the airline industry. Reducing congestion is good environmental policy. I think there is too much saber rattling that goes on in some of these development projects that gets in the way of some environmental progress. Letting the freight rail industry innovate and expand, and making policies in our Government reflect that ability to expand is good environmental policy.

And let's not forget. I know no one has mentioned the word "public transit" in this hearing. If you boost public transit in this country, and you boost it in some of these large, metropolitan areas like Mr. Nadler's and others, and give them more resources so they can expand, not have to cut service, like we are seeing around the country, that relieves congestion, that makes more room for freight, and that is good environmental policy, as well.

Ms. HAHN. Thank you.

Mr. DUNCAN. Thank you very much, Ms. Hahn. Before I make my closing comments, I believe Ms. Brown wants to ask some more questions.

Ms. BROWN. Mr. Chairman, this has been very educational. I just want to say that the Chamber from Miami was here and they was watching. And so I think, keeping in mind that we have the support of the business community, their interest in us working together to move a transportation bill that will give us the revenue enhancements, taxes, or whatever you want to call it, and making sure that we reinstate, let's say, the earmarks, Members' priorities,

so that the communities can work together to get the immediate resources.

Yesterday the Department of Transportation released the TIGER grants. We will have billions of dollars requested, just millions to fund, because of the pent up demands in the community, and those choke points that you all have talked about.

So, I want to thank you very much, and thank you, the chairman and the ranking member, for convening this committee. And thank you all for your testimony. It would be—it has been very helpful. Thank you.

Mr. DUNCAN. Well, thank you. Mr. Lipinski, anything else?

Mr. LIPINSKI. You really don't want to take any more time here, Mr. Chairman, do you? I was going to say I just talked to Illinois Council of Engineering Companies, and they also were excited that this is going on, that we are talking about this. They understand the need to get this done. But thank you, Mr. Chairman.

Mr. DUNCAN. Thank you very much. You know, I was a judge for 7½ years before I came to Congress. And I always tried to get to court right on time. And then I came here, and it seemed that every hearing started 15 or 20 minutes late. So when I started chairing subcommittees, I tried to start right on the minute every time. And my goal was always to hold these hearings to a couple of hours. I am fascinated with these topics, but I found that you had better participation by Members if you started these hearings on time and kept them running, and I have always tried to do that. We have run a little bit over today, but the testimony has been fascinating.

I just want to say just a few things. You know, there are many challenges within transportation, but we are all in this together. There is an important local role, there is an important State role. But I have always thought there was a very important Federal role in all of these topics, because people in California sometimes use the airports in Texas, and vice versa. People in Ohio sometimes drive on the roads in Tennessee and vice versa. People in New York sometimes drink the water in Florida, and vice versa. And so we are all in this together.

But it seems to me that there are many challenges. But number one, of course, is funding. And most of you have said some things about that, and that is a problem for all of us. But I have said in here for many years that we need to stop spending trillions of dollars on unnecessary wars and things in other countries and start taking care of our own country for a while.

The second biggest thing, it seems to me, is to speed up project delivery. I remember when I chaired the Aviation Subcommittee, they testified that the newest runway at the Atlanta Airport, which is now several years old, took 14 years from conception to completion. It took only 99 construction days. And they were so relieved to get all the final approvals, that they did that in thirty-three 24-hour days. Then, when I chaired the Highways and Transit Subcommittee, the Federal highway people told us that their last two studies, one said 13 years, one said 15 years from conception to completion on all the highway projects.

And, Mr. Newsome, I remember meeting with Maersk one time and they told us about the Norfolk Port project that they just basi-

cally did on their own. They did everything for the Government to try to speed things up. Hopefully MAP–21 will have some effect on that. It seems to me that when we are forced into it we can move pretty quickly, like on the Interstate 35 bridge project, when we all got together on that.

And then the third thing, the third big area to me seems to be how do we balance our resources. Because what you have got, you have got people moving all over the country, from the high-tax States to the low-tax States. You have got people all over the country still moving out of the small towns and rural areas to the popular urban areas. And I see that in Tennessee, for instance, because, Mr. Smith, you know the fast growth in Tennessee is in the circle around Nashville and the circle around Knoxville. Half the people I represent have moved from someplace else. It is phenomenal.

These big cities, primarily in the Northeast, have such an aging infrastructure, they need a lot of work. But then you have got the fast-growth areas like the Knoxville area, Nashville, and a lot of other areas around the country. They have to have a lot of work done because of all the growth. And then, all of us have a soft spot in our heart for the small towns and rural areas, and you don't want to force people to keep moving out of those areas, and those are poor economic areas. So they need a lot of help.

But, Mr. Wytkind, these jobs are jobs that can't be outsourced, for the most part. And that is important to me, because, you know, I represent the University of Tennessee and a lot of other small colleges. And I see we are ending up with the best-educated waiters and waitresses in the world. And there is nothing wrong with that, that is honorable employment, but you hate to see people, even with advanced degrees sometimes, who can't find the good jobs that they used to be able to find.

Mr. Newsome, the most fascinating slide I think you showed was that one showing that the Panama Canal was moving to allow ships with—was it 12,600 TEUs?

Mr. NEWSOME. 12,500.

Mr. DUNCAN. 12,500? That amazes me, because I have seen all those—I have seen presentations—I remember when they thought 8,000 TEUs was just almost unbelievable. And then you go back into the fifties and sixties and they were really small. But we have got to keep improving these ports. I had the opportunity to open and close the Panama Canal at one point. I have been there and been to most of the ports. And I am glad to see you doing what you are doing.

Let me just add this. We need specifics, as many specifics as we can. And, Mr. Moorman, I was glad to see you mention the Crescent Corridor project, because at the request of my good friend and yours, John Corcoran, I put in the first money to do the first Federal study of that project. And, boy, that is sure something that would—as you said, would be good for my area, but many other parts of the country as well.

At any rate, we have been asked to go around the country, we have been asked to make recommendations to all the different subcommittees. And if there is any specifics that you think of after you leave here or that you didn't really have an opportunity to get into

in your testimony or your responses today, please submit them to us, because we want everybody to do well. We have got a great transportation system. As an individual or as a company or whatever, you lose the desire to improve. It is sad for you and it is sad for the people you work for. I hope I am a better congressman now than I was 5 years ago. I hope, if I am here a while longer, that I am a better congressman in the future.

So, we got to keep trying to do more. We got to keep trying to do better. And that is what this panel is all about. So as many specifics as you can give us for our final report 6 months from now, we would certainly appreciate. And we appreciate the work that you have put into your testimony and your responses here today. And I would like to call on Mr. Nadler to close out the hearing.

Mr. NADLER. Well, thank you very much, Mr. Chairman. I want to thank you for convening the hearing. I want to thank the witnesses and the Members.

This is the beginning of what will hopefully be a very fruitful investigation into a—that may result in a unified, intelligent, comprehensive freight policy for this country, something we haven't had in a long time, an intermodal freight policy that will look at all the different modes, it will figure out how to finance them.

Obviously, the elephant in the room is how to finance all of this. The gas tax, the gasoline tax, which has been the—or the diesel fuel tax, which has been the primary source of financing for infrastructure, has been—is a wasting asset, both because of not adjusted for inflation, and we are becoming more fuel-efficient, which we want to be. Both of those reduce the revenues from the tax, and we have got to do something to replace it, obviously. It is something that we can pass politically, which may be more difficult than intellectually.

We have to figure out how to cut down on the red tape and on the delays in implementing projects. And how to make sure that, from a national point of view, we have those projects, Projects of National and Regional Significance and others, that will make the freight system, as much as possible, seamless and efficient. It is a tall order for 6 months, but I assume we will come up with some decent answers.

And I want to thank everybody involved in this, and in particular, the witnesses today.

Mr. DUNCAN. All right. Thank you very much. I have to ask unanimous consent that the formal invitation letter sent by Chairman Shuster and Ranking Member Rahall to the members on this panel be entered into the record of today's hearing.

[The information follows:]

**Committee on Transportation and Infrastructure**
**U.S. House of Representatives**

Bill Shuster
Chairman

Washington, DC 20515

Nick J. Rahall, II
Ranking Member

Christopher P. Bertram, Staff Director

James H. Zoia, Democrat Staff Director

April 23, 2013

Dear Panel Member:

We write to notify you that you have been selected to serve on a panel on freight transportation constituted under the Rules of the Committee on Transportation and Infrastructure. The panel has been tasked to examine the current state of freight transportation in the United States and how improving freight transportation can strengthen the United States economy.

The panel will recommend ways to improve the movement of freight across all modes of the Nation's transportation network. The panel will report its findings, including any recommendations for possible legislation, to the Full Committee.

**Panel Name:**

Panel on 21st Century Freight Transportation

**Panel Members:**

John J. Duncan, Jr., TN, Chairman
Gary Miller, CA
Rick Crawford, AR
Richard Hanna, NY
Daniel Webster, FL
Markwayne Mullin, OK

Jerrold Nadler, NY, Ranking Member
Corrine Brown, FL
Daniel Lipinski, IL
Albio Sires, NJ
Janice Hahn, CA

**Rules and Procedures:**

The panel is constituted under Rule XVIII of the Rules of the Committee on Transportation and Infrastructure to serve for a period of six months beginning on the date of its organization, April 24, 2013.

The panel will follow the rules and procedures of the Committee on Transportation and Infrastructure, as adopted by the Committee for the 113th Congress, in all of its meetings,

hearings, and other activities. These rules and procedures include the meeting, hearing, quorum, and record vote requirements of Committee rules.

**Staffing:**

The panel will be assisted by staff of the House Committee on Transportation and Infrastructure designated by the Chairman and Ranking Member of the Committee for this purpose.

**Work Plan:**

The panel will examine the current state of freight transportation in the United States to identify (1) the role freight transportation plays in the U.S. economy; (2) ways to increase the efficiency, safety, and overall condition and performance of the Nation's freight network; (3) how technology assists in the movement of freight; and (4) financing options for transportation projects that improve freight mobility.

In examining the Nation's freight mobility issues, the panel will focus on four primary areas:

- The role freight transportation plays in the U.S. economy—
  - What are the economic impacts of inefficiencies in our Nation's freight transportation network?
  - How does the transportation of freight impact consumers?
  - How do changes in the business models and the global supply chain impact our freight transportation network and the U.S. economy?
  - How does U.S. transportation and infrastructure policy affect global supply chains and the Nation's global competitiveness?

- Ways to increase the efficiency, safety, and overall performance of the Nation's freight network—
  - What are the sources of inefficiencies in our Nation's freight transportation network?
  - How can the efficient movement of goods between highways, ports, inland waterways, railroads, air carriers, and pipelines be improved?
  - Are states, localities, and the Federal government adequately considering freight transportation as they plan and select transportation projects?
  - How can the safety of freight movement across all modes be improved?

- How technology assists in the movement of freight—
  - What role does technology play in transporting freight?
  - How can freight transportation better utilize technology to improve efficiency, safety, and performance?
  - What are the cybersecurity vulnerabilities for freight critical infrastructure, such as intelligent transportation systems, railway signals, the air traffic control system, and the Next Generation Air Transportation System?
  - What safeguards are necessary to protect the cybersecurity of freight critical infrastructure and ensure the safe and efficient movement of freight?

- More efficient uses of Federal dollars to fund transportation projects that improve freight mobility—
  - What role should states, localities, and the Federal government play in funding or financing projects that facilitate the movement of freight?
  - What role should the private sector play in funding or financing projects that facilitate the movement of freight?
  - What are the financing or funding options for projects that promote efficient movement of goods between modes of transportation or that involve large multi-state freight projects?
  - What are the effects of different financing or funding options on shippers, carriers, and consumers?

If you or your staff have any questions or need further information, please contact the Committee office at (202) 225-9446.

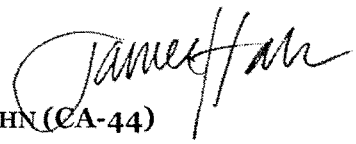
Sincerely,

Bill Shuster
Chairman

Nick J. Rahall, II
Ranking Member

We thank you all very much for being here, and your work and that will conclude this hearing.

[Whereupon, at 12:28 p.m., the panel was adjourned.]



CONGRESSWOMAN JANICE HAHN (CA-44)

TRANSPORTATION AND INFRASTRUCTURE SUBCOMMITTEE ON
PANEL ON 21ST CENTURY FREIGHT TRANSPORTATION

HEARING:
"Overview of the United States' Freight Transportation System"

WEDNESDAY, APRIL 24, 2013
10:00 A.M.
2167 RAYBURN

OPENING STATEMENT

Chairman Duncan and Ranking Member Nadler, I am honored to be part of this panel and pleased to have the opportunity to participate in this panel's work over the next six months.

I first want to congratulate FedEx on its 40th anniversary this month. In April 1973, Fred Smith launched FedEx with 14 small aircraft from Memphis, delivering 186 packages to 25 cities around the United States. Today, as we all know, FedEx is a global company. Congratulations.

For me, with the Port of Los Angeles in my backyard, freight policy is on the forefront of my mind. When I came to Congress from the Los Angeles City Council, I was surprised that there wasn't a dialogue about PORTS and freight, which is why I co-founded the PORTS Caucus. We are making progress -- the President mentioned ports in his State of the Union Address this year.

Of course, there is more to be done: (1) dredging our ports and (2) landside transportation.

With the Panama Canal, numerous ports across the country are trying to dredge to be able to take the Panamax and New Panamax ships. At the Port of Los Angeles, we just completed our last dredging project. This isn't true for other ports. We need to examine spending the Harbor Maintenance Trust Fund. We collect the funds at ports, but they are building up in the trust fund. We need to be able to access these funds and ensure that all the ports contribute receive their equitable share.

When I discuss our nation's competitiveness, I always say that it is not how deep our ports are but the quality of our landside infrastructure. We wouldn't be here today on this panel if we all did not recognize that we have major freight infrastructure needs—quality of our highways and bridges, grade separations, interchanges to name a few. But, we cannot just fix one region's freight infrastructure and not another because it is a national system.

For example, goods that leave the Port of Los Angeles take 48 hours to arrive in Chicago and takes 30 hours to travel across the city—fyi, that's the speed of an electric wheelchair. What does this bottleneck and others like it mean? It means our nation is at an economic disadvantage. We have higher costs for consumers, more congestion, more pollution, and less jobs. We need to stop this piecemeal system and develop and invest in a strong national freight system.

Thank you Mr. Chairman.

**United States House Committee on Transportation and Infrastructure**

**The Panel on 21st Century Freight Transportation**

**"Overview of the United States' Freight Transportation System"**

**Testimony of Frederick W. Smith**

**Chairman, President and Chief Executive Officer**

**FedEx Corporation**

**April 24, 2013**

Chairman Duncan, Ranking Member Nadler and members of the committee.

Thank you for inviting me to testify before the committee today. I know that you all understand the importance of intermodal transportation in today's cost- and time-driven economy. But let me put it into the context of my company and its services.

Forty years ago this month, FedEx was a pioneer in intermodal transportation, starting up our hallmark door-to-door air-and-ground business. They thought it was a crazy idea back then.

Today, we continue to explore new intermodal offerings through our group of transportation companies, from air to ground to ocean. Our services span the globe, connecting U.S. businesses to each other and to all major global marketplaces.

FedEx and Intermodality

Intermodality allows transportation services to be offered to American customers in the most efficient way, providing transport products that vary as to speed, price and mode. This distinguished panel represents various modes of transportation available to U.S. shippers – air cargo, trucking, freight rail services, ocean-going vessels and port services.

Our air cargo piece, operated by our FedEx Express subsidiary, is our oldest operation. However, before I go into more detail on air cargo, let me tell you how FedEx has evolved to participate in other modes of transportation here in the U.S.

- Our FedEx Express air-ground system, now a global network, still offers overnight shipping within the U.S. as well as linking the American economy to 99 percent of the world's GDP.
- Our FedEx Ground and FedEx Freight networks use both road and rail to speed products from business-to-business as well as business-to-consumer services, which are essential in these days of Internet shopping.
- Our FedEx Trade Network business provides freight forwarding services around the world, combining air, ground and ocean shipping options tailored to meet the varying needs of our customers.

For intermodality to work, we need infrastructure that allows us to make the most out of the transportation options in a sustainable manner.

- We need the best air traffic control systems, so that more flights can operate safely in the congested air space and at crowded airports around the United States.
- We need well-maintained roads, so that the most direct routes can be operated efficiently, safely and swiftly.
- We need efficient sea and air ports, equipped with modern technology to speed shipments through these potential choke points and onward to the end of their journey.

All of this transportation must be performed in a way that fully utilizes existing and new assets, while protecting our environment and maximizing our natural resources.

FedEx Express and air cargo

In April 1973, FedEx launched a new air cargo service. That night, 389 Federal Express employees used 14 Dassault Falcon jets to deliver 186 packages overnight to 25 U.S. cities.

Our hub-and-spoke distribution system was one uniquely developed to deliver overnight express packages from one point to any other on the network. This capacity was unprecedented. Also, we created an integrated air-ground express network that was a first in the air cargo industry. And we understood at FedEx that information about the package is as important as the package itself, so we also originated the first tracking system to enable people to keep tabs on their shipments.

The company's creation was driven by the automation of society and the increasing use of computers and electronic devices for many different applications. There was a growing need to move small, important shipments randomly throughout the U.S.

Today, we have a fleet of over 660 aircraft including our new Boeing 777 freighter, one of the most efficient freighter aircraft in the world. We serve over 375 airports in the U.S. and abroad. On the ground side of the express service, we operate 47,000 surface vehicles. This includes the latest in all-electric and hybrid trucks, some of which transit the street of Washington each day.

FedEx Express carries an average of 4 million pieces and 12 million pounds of freight each day in our global air express system. Together, our 150,000 team members operate the largest express transportation company in the world, serving more than 220 countries and territories.

In addition to serving regular FedEx customers around the country, we provide air transportation services to the U.S. Postal Service, making us their largest single service supplier.

Aviation creates jobs, and this is certainly true for air cargo. My home town and the FedEx headquarters city of Memphis, Tennessee has recently renamed itself as "America's Aerotropolis." An aerotropolis is "aviation plus": according to the Greater Memphis Chamber of Commerce, it is a city or an economic hub that extends from a large airport into a surrounding area that consists mostly of distribution centers, office buildings, light manufacturing firms, convention centers, and hotels, all linked to the airport via roads, expressways, and rail lines. For the greater Memphis aerotropolis, a primary element is the express and air cargo business of FedEx Express. This is supplemented by our trucking companies, FedEx Ground and FedEx Freight, traversing the three interstate highways which serve the city, plus businesses that are attracted to this combined transportation powerhouse. Memphis also has advantages in having five Class 1 railroads and the fourth largest inland water port. In Memphis, the Chamber of Commerce tells us, 10.2% of the work force is employed as workers in transportation, warehousing and utilities – the highest share among the top 100 Largest Metro Areas in the U.S. So we know transportation, and we know that air cargo services can be the centerpiece of a true intermodal system.

Air cargo pumps the lifeblood of U.S. technology from factory to warehouse to retail outlets to consumers. Within the U.S. and around the world, air cargo moves shipments that are compact, perishable and that have a high unit value – goods that need to be there now. Today's air cargo moves both the tablets that consumers simply want now and the vaccines that people desperately need now.

International air cargo, including air express, is a $98-billion business. It transports 35% of the value of goods traded internationally, worth some $10 trillion, but only 2% of the tons moved. According to the International Air Transport Association (IATA), in 2010, the value of goods transported by air was $32.78 a pound as compared to $1.87 a pound by ocean. Air cargo is a critical part of the airline business, which is part of a value chain that globally supports 32 million jobs and $3.5 trillion of economic activity.

Air cargo connects the U.S. producers to far-flung international marketplaces. While air accounts for just 0.4% of the tonnage of U.S. international trade, air freight makes up more than a quarter of the value of international trade, according to IATA.

Demand for U.S. air cargo services has been accelerated by the demand of Internet shoppers. In 2011, for example, 10 million customers spent $1.25 billion on-line, conducting an average of 1.9 transactions each and spending an average of nearly $125 each.

Critical Infrastructure for Air Cargo Services

To offer these air services, we need the infrastructure and public services associated with aviation. One government service that is critical to the safe operation of the U.S. aviation system is air traffic control. Today, the Federal Aviation Administration is responsible for the safe navigation of aircraft within the American airspace. Unfortunately, the basic design elements of the system have not changed significantly since its inception in the 1950's. To meet future demand, maintain safety and avert gridlock, the nation must deploy new technology, modernize procedures, add capacity and increase productivity. This initiative is called "NextGen," denoting the next-generation technology which it will feature.

FedEx Express is excited about the possibilities that the FAA's Next Gen air traffic control system offers U.S. airlines. This GPS-based system will enhance safety, reduce delays, save fuel and reduce emissions.

- For our operations, NextGen means less time sitting on the ground and holding in the air. NextGen technology and procedures can shave minutes off flight times, which translate into money saved.
- For our fleet and our crews, NextGen innovation and improvements can deliver an even higher level of safe operations. NextGen can provide air traffic managers and pilots with the tools to proactively identify and resolve weather and other hazards.
- For our nation, NextGen can make aviation even more environmentally friendly. Direct routing eliminates circuitous flight plans which waste fuel and energy. More precise flight paths and controlled descent will help to limit the numbers of people impacted by aircraft noise, a factor especially important to FedEx Express, so that we can be better neighbors while flying at night.

Another element of aviation infrastructure is airports. Adding runways in the U.S. has become a massively time-consuming effort, averaging 20 years from planning to pavement. However, within the next 10 years, the top twenty airports in the U.S. will become overly congested. While control of traffic in the air will help, new runways and facilities will still be needed and existing ones will need maintenance. The newest runway built in Memphis (dedicated in 2000), for example, is the World Runway, which is 11,100 ft. This allows our Superhub the ability to

dispatch fully loaded, wide-bodied jets that carry up to 25 per cent greater maximum payloads and fly non-stop to points halfway around the globe. Using this runway allows our B-777F's to reach Asian points such as our Guangzhou and Narita operations without stopping. In the end, sufficient tarmac is a *sine qua non* of U.S. air operations.

Finally, although you may not think of it as infrastructure, we need a more flexible and sustainable energy supply – biofuel for aircraft, electricity for delivery vans and natural gas for our long-haul trucks. I include it as "infrastructure" because it is a critical element that supports our industry, and this need extends to all modes, not just aviation. For FedEx, sustainability is a relatively simple concept: to connect the world responsibly and resourcefully. That's why we focus upon issues like vehicle fuel efficiency, cleaner vehicle technologies, reducing aircraft emissions, and finding alternative sources of cleaner domestic energy, including renewables. For aviation, we want a jet fuel that can be used (without changing infrastructure) that is safe and delivers environmental, economic and operational benefits, such as supply reliability. FedEx Express has a sustainability goal, set forth in 2009, to get 30 percent of its fuel from alternative sources by 2030.

While we and other private sector actors will continue to seek sources of alternative fuels, we believe that the U.S. government has a role to play in encouraging the development of alternative aviation fuels. FedEx participates in the joint private-sector-government taskforce, Commercial Aviation Alternative Fuel Initiative (CAAFI). We strongly support the work of this organization, allowing both private sector actors and appropriate government agencies to come together to meet the goal of developing alternative fuel for U.S. airliners.

Other FedEx modes

Beyond express and air cargo, FedEx now has a portfolio of shipping services to move freight within the U.S. and around the world. Our two surface transportation subsidiaries, FedEx Ground and FedEx Freight, have become national operators, offering small parcel and less-than-truckload shipping options to businesses across the country.

One way we can help freight move around the U.S. is by maximizing our existing infrastructure. In 2011, 67% of all U.S. domestic freight tonnage moved by truck– that is 9.2 billion tons of freight. As transportation service demand has increased over the years, equipment standards for other transportation modes have been necessarily adjusted to accommodate more capacity (such as double-stacked rail containers). It is time to make adjustments to trucking equipment standards as well.

Less-than-truckload (LTL) carriers and many other companies, including both FedEx Freight and FedEx Ground, rely primarily on twin trailers to haul freight. In 1982, Congress fixed a standard of 28 feet for twin trailers that states must allow on their highways. Capacity expansion

opportunities for these types of trailers have not been adjusted for over two decades due to the Federal freeze on truck size and weight under the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA).

FedEx strongly supports the proposal to increase the national standard for twin trailers from the existing 28 feet to 33 feet. This would not include an increase in gross vehicle weight, so it would not increase wear-and-tear on the already-taxed intrastate highway system. In fact it could reduce that burden by reducing truck miles and truck trips. The use of 33-foot. twin trailers as compared to 28-foot twin trailers would allow a carrier, on any given lane, to grow the volume of shipments carried up to 18% before adding incremental miles. The use of 33-foot twin trailers was recommended by the Transportation Research Board in its Special Report 267 and also by the Energy Security Leadership Council. This solution to our infrastructure issues adds no weight to the current Federal 80,000 lb. limit.

Studies have shown that an increased trailer length to 33 feet will be as safe or even safer than the existing 28-foot length in terms of handling on the road. In pilot testing, our own drivers have told us repeatedly that they find them to be more stable. Plus, safety could be enhanced simply by reducing the trips and mileage driven.

As I've noted, longer trailers will mean fewer truck trips to move the same volume. This can result in a reduction in congestion. At a time when adding more lanes may be problematic given budget cuts, this is a way to help alleviate an acute problem without spending Federal dollars.

Similarly a reduction in truck trips would be environmentally friendly, saving on fuel and emissions from trucking. The EPA SmartWay Transport Partnership Program identified use of more productive vehicles as an effective emissions reduction strategy. Using FedEx Freight metrics as a baseline, we have estimated that, for the LTL industry alone, anywhere from 1.1 million to 3.2 million pounds of carbon could be saved, through a reduction in highway usage of 600 million to 1.8 billion miles and concomitant fuel saved estimated at 102 million to 305 million gallons.

Conclusion

Over the past 40 years, FedEx has remained both a driver and an indicator of the global economy, evolving and adapting to the modern world. FedEx was built upon innovation in transportation services and such innovation will continue to drive the FedEx business strategy culture.

# TESTIMONY OF

# WICK MOORMAN

## CHAIRMAN, PRESIDENT & CHIEF EXECUTIVE OFFICER

**BEFORE THE**

**U.S. HOUSE OF REPRESENTATIVES**

**SPECIAL PANEL OF THE HOUSE TRANSPORTATION AND INFRASTRUCTURE COMMITTEE**

**HEARING ON 21ST CENTURY FREIGHT TRANSPORTATION**

**April 24, 2013**

**Norfolk Southern Corporation**

**Three Commercial Place**

**Norfolk VA 23510**

**757-629-2600**

*(INTRODUCTORY TEXT IMAGE)*

Chairman Duncan, Ranking Member Nadler, panel members: Thank you for the opportunity to discuss the future of America's freight rail system. It is an honor to do so on behalf of Norfolk Southern's 30,000 employees, 32,000 shareholders, 39,000 suppliers, and 8,700 customers – three of whom are FedEx, the South Carolina Ports Authority, and Werner Enterprises.

*(FEDEX TRAIN IMAGE)*

I will be using a few images today, so please watch the screens.

Norfolk Southern is the fourth largest privately-owned U.S. railroad. We transport 7 million shipments a year. With tracks serving the Eastern United States and its ports, and connections to other modes, we access the world. While my comments highlight Norfolk Southern, America's 560 railroads together are a network, and we share the opportunities ahead.

Last week, the Wall Street Journal said railroads "make headlines only when calamity strikes." True. Calamity is rare, and we generally are in the background, safely and economically moving raw materials, intermediate products, and finished goods where they need to go. In Norfolk Southern's case, we have been doing that for 186 years, not that we are counting.

What of the next 186? In railroading we have to make expensive long-term bets, even though the crystal ball is cloudy. Locomotives last more than 20 years; freight cars longer. New track will carry traffic for decades. Terminals, such as the one

we're expanding at Bellevue, Ohio, serve generations of customers. Our bridge over the Ohio just turned 100, and our chief engineer promises that with proper investment it will last 100 more.

*(CRESCENT CORRIDOR MAP IMAGE)*

The Crescent Corridor is an example of strategic investing. This series of infrastructure improvements will reduce transit times, increase capacity, and compete with trucks from New Jersey to Louisiana. It is a 10-year project, with a projected 2.5 billion dollar cost shared by Norfolk Southern and partners. The screen shows an example of the projected benefits for just a single state.

*(CLEAN GREEN RELIEF FOR CONGESTED ROADS IMAGE)*

Messrs Duncan, Hanna, Nadler, and Sires are familiar with the Corridor's importance, as your districts include many of its components. Relatedly, Ms. Brown and Mr. Lipinski have been leaders of the CREATE and High Speed Rail projects that serve Chicago. Without your leadership, these massive projects that will serve millions of people would not be under construction today. They are not small endeavors. Nor are they inexpensive. But they are necessary. After all, they will serve our great grandchildren.

Norfolk Southern is ready for traffic from the Panama Canal expansion. We are moving crude oil and serving the domestic natural gas industry. We are hiring military veterans and reservists, and with leaders from labor organizations such as those represented by Mr. Wytkind, training tomorrow's workforce. We are reducing our carbon footprint and improving technology to use less fuel.

*(S.C. INLAND PORT IMAGE)*

We are contributing to the President's goal of increasing exports. In fact, we are a partner with Mr. Newsome and his team developing the South Carolina Inland Port. It is an excellent opportunity – look at the impact of the inland port served by Norfolk Southern west of here, at Front Royal.

*(VA INLAND PORT IMAGE)*

For its part, government can do three things.

First, support freight rail's continuing ability to earn adequate returns and invest in our companies. For every revenue dollar, railroads return 40 cents to infrastructure and equipment.

*(CAPITAL EXPENDITURES IMAGE)*

From 2010 through the end of 2013, Norfolk Southern alone will have reinvested 7.5 billion dollars in private capital. This sustains jobs. In the last three years alone, Norfolk Southern hired more than 9,000 people. We will hire another 1,200 this year.

This is so important. Industries, jobs, and taxes want to go where the railroad is. In the last decade, Norfolk Southern helped locate 1,021 new and expanded facilities located along our lines, representing 28.7 billion dollars in customer investment and generating 48,000 jobs. That's just one railroad. What an incredible incentive to support railroads everywhere.

The second thing is: Put the economy on sound footing. Reduce the deficit. Create a stable environment for long-term growth. Help everyone – including the railroads as we pay our share of taxes -- see a clear path forward.

My concluding recommendation is: Find sensible ways to allow the private sector and partners to invest in projects that will serve the economy of tomorrow. The longer it takes to steer through regulatory hurdles, the longer we wait for economic growth. Fix regulations – as you did with the FRA locomotive inspection rule in 2012 – so that they enhance safety, productivity, and investment.

Privately-owned railroads are a barometer of the economy. We are planning for growth. I hope that, working with you, we all can look far ahead and do everything possible to make it happen.

*(TRAIN IMAGE)*

Thank you.

*Before the*

**Panel on 21st Century Freight Transportation**
**Committee on Transportation and Infrastructure**
**United States House of Representatives**

*Statement of Derek J. Leathers*
*President and Chief Operating Officer*
*Werner Enterprises, Inc.*

*Hearing on*

**Overview of the United States' Freight Transportation System**

**April 24, 2013**

**INTRODUCTION**

Chairman Duncan, Ranking Member Nadler, and members of the panel, thank you for giving me the opportunity to testify at the first hearing of this special panel on behalf of Werner Enterprises, Inc. Werner is a member the American Trucking Associations, Inc. (ATA), and the views expressed in my testimony are consistent with ATA's positions. I would also like to commend Chairman Shuster and Ranking Member Rahall for creating this panel in recognition of the importance that freight plays in our nation's economy. I look forward to working with this panel and the full committee to craft a surface transportation reauthorization bill that promotes the safe, clean, and efficient movement of goods.

I am President and COO of Werner Enterprises, Inc., a premier transportation and logistics company, founded in 1956, with coverage throughout North America, Asia, Europe, South America, Africa and Australia. Werner maintains its global headquarters in Omaha, Nebraska. Werner is one of the five largest truckload carriers in the United States, with a diversified portfolio of transportation services that includes dedicated; medium-to-long-haul, regional and local van; expedited; temperature-controlled; and flatbed services. Werner's Value Added Services portfolio includes freight management, truck brokerage, intermodal, and international services. International services are provided through Werner's domestic and global subsidiary companies and include ocean, air and ground transportation; freight forwarding; and customs brokerage. We have more than 7,250 tractors, nearly 25,000 trailers and over 13,000 employees and independent contractors.

Mr. Chairman, a safe, efficient system of highways connecting America's cities, towns and rural areas is essential to our country's economic well-being, military security, and overall quality of life. Your predecessors recognized the necessity of good road transportation by creating the Interstate Highway System, which has served our country well, and today allows even the smallest entrepreneur to access markets throughout the country and around the world.

Every day, thousands of trailers and containers, carrying everything from grain to machine parts, flow through our ports, across our borders, and on our highway, rail, air and waterway systems, as part of a global multimodal transportation logistics system. It is a complex array of moving parts that provides millions of jobs to Americans, broadens the choices of products on store shelves, and creates new and expanding markets for U.S. businesses. Highways are the key to this system. Trucks move 68% of our Nation's freight tonnage and draw 81% of freight revenue.[1] In addition, trucks move $8.3 trillion worth of freight each year, nearly 60% of the U.S. economy,[2] and the trucking industry is expected to move an even greater share of freight in the future.[3]

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[1] Global Insight, *U.S. Freight Transportation Forecast to...2023*, 2012
[2] U.S. Census Bureau, *2007 Commodity Flow Survey*, Dec. 22, 2009
[3] Global Insight, *U.S. Freight Transportation Forecast to...2023*, 2012

Trucks are also crucial to freight moved by rail, air, and water. The highway system connects all of these modes to manufacturing and assembly plants, warehouses, retail outlets, and homes. An efficient highway system is the key to a fluid global supply chain, which in turn is a fundamental element of a growing and prosperous economy. It should also be noted that despite the emphasis on promoting the use of intermodal transportation for moving our Nation's freight, 93% of freight moves by a single mode.[4] The share of additional freight that could benefit from intermodal service is extremely small, and the vast majority of freight will continue to be carried by trucks on the highway system.

**THE TRUCKING INDUSTRY CONTINUES TO GET SAFER**

Safety is the trucking industry's highest priority. Industry-supported federal regulations, combined with better training, advanced safety technology and a greater focus by carriers on creating a better safety culture within their companies, have produced tremendously positive results. Over the past decade, the number of truck-related fatalities has decreased by 24% and the number of injuries has been reduced by 39%, despite steady growth in the overall number of trucks and miles on the road.

Unfortunately, new hours of service regulations that are scheduled to take effect in July will reduce industry productivity by 2-3%, without offsetting safety benefits. As such, it will take more drivers and trucks to move the same amount of freight. Furthermore, the rules will have the unintended safety consequence of putting more trucks on the road during morning peak travel periods. And, the new, unjustified provisions will make compliance more complex. In addition, a growing lack of truck parking along major truck corridors – which will be exacerbated by the new HOS rules – is making it increasingly difficult for drivers to get their needed rest and comply with federal regulations.

Mr. Chairman, while we are pleased with our progress, we believe that the industry's best days are before us. The development and adoption of new on-board technology, such as stability control and forward collision mitigation systems, will significantly reduce truck-involved crashes. We urge Congress to support these advances.

**THE TRUCKING INDUSTRY IS CLEANER THAN EVER**

Each new truck purchased today produces 90% less particulate matter (PM) and nitrogen oxides (NOx) emissions than a decade ago. To put this improvement into perspective, the emissions from 60 new trucks purchased today roughly equals the emissions produced by a single new truck purchased in the mid 1980s, when truck emission standards were first established. Trucking was the first freight mode to widely use advanced diesel engine emission control systems. In 2002, the trucking industry began buying new trucks which incorporated exhaust gas recirculation (EGR), which combined with other emission control technologies to reduce tailpipe emissions of NOx by half. In

[4] U.S. Census Bureau, *2007 Commodity Flow Survey*, Dec. 22, 2009

addition, as of 2010, all on-highway diesel fuel sold in the United States contains near-zero levels of sulfur (<15 parts/million).
ATA launched a proactive industry-wide sustainability plan in 2008 to reduce greenhouse gas emissions by nearly one billion tons and fuel consumption by over 86 billion gallons over a ten-year period. ATA helped to develop and is a Charter Partner of the EPA SmartWay Transport Partnership's voluntary greenhouse gas reduction program, which includes close to 3,000 trucking fleets. Launched in 2004, fleets have saved 55 million barrels of oil, the equivalent of taking over 3 million cars off the road for an entire year. SmartWay's clean air achievements – 24 million metric tons of carbon dioxide, 478,000 metric tons of nitrogen oxides, and 24,000 metric tons of particulate matter reduced so far – help to protect public health.

Finally, greenhouse gas and fuel economy standards will take effect for new trucks beginning with model year 2014 equipment. It has been estimated that this new rule will reduce $CO_2$ emissions by about 298 million tons and save approximately 530 million barrels of oil over the life of model year 2014 to 2018 vehicles.

**CONDITION AND PERFORMANCE OF THE HIGHWAY SYSTEM**

Mr. Chairman, the highway system is the lifeblood of the trucking industry and the key to moving America's freight. Unfortunately, the system no longer meets our transportation needs. A new report from the Texas Transportation Institute at Texas A&M University confirms what many of us already know: that in many American cities traffic gridlock is not only frustrating and time-consuming, it is also extremely expensive. TTI's *2012 Urban Mobility Report* found that congestion in 498 U.S. cities cost the economy $121 billion in 2011, up from an inflation-adjusted $24 billion in 1982. The report determined that $27 billion of the 2011 costs were borne by the trucking industry, and passed on to customers and, ultimately, consumers.

However, our highway woes are not just limited to congestion. According to the American Society of Civil Engineers (ASCE), 31% of travel occurs on deficient pavement, resulting in higher freight costs due to greater vehicle operating expenditures and more potential for damaged goods.[5] Furthermore, the Federal Highway Administration reports[6] that more than 100,000 bridges are structurally deficient or functionally obsolete, which means that these structures will need either major improvements or will have to be replaced, at enormous cost. In addition, 3,600 bridges are in such poor condition that they have been closed, and 61,000 have been load-posted, forcing trucks to re-route, adding miles and cost to deliveries.

What is being done to address these problems? Unfortunately, very little. ASCE reports that while the U.S. is currently investing $70 billion in our highways annually, an investment of $133 billion is necessary <u>just to prevent the situation from getting worse</u>.

[5] American Society of Civil Engineers, *2013 Report Card for America's Infrastructure*, 2013.
[6] Federal Highway Administration, *National Bridge Inventory*, Dec. 31, 2012.

By 2020 the investment shortfall is projected to reach $756 billion and an unimaginable $3.25 trillion by 2040.[7]

The most recent Conditions and Performance Report by the Federal Highway Administration estimates that we need to invest $101 billion annually at all levels of government just to maintain today's substandard conditions and performance on our roads. To improve our road system, the C&P Report estimates that we would need to invest $170 billion annually.

The Interstate System, the larger National Highway System, and the soon to be designated "National Freight Network" must be our top priority. The NHS contains only 5% of the Nation's total route mileage but carries 55% of all vehicle miles travelled and 93% of truck VMT.

The federal Highway Trust Fund, which since 1956 has provided the bulk of funding for the Interstate Highway System and other major highways plied by 18-wheelers is, for all intents and purposes, bankrupt. The Fund, which normally relies almost exclusively on revenue from federal fuel taxes and truck fees, is being kept afloat by an annual infusion of nearly $10 billion in General Fund subsidies. As highway construction costs continue to escalate and vehicle fuel efficiency improves, that dependency will grow. In an era of massive federal budget deficits, the future of the federal-aid highway program is in serious jeopardy. Despite reports to the contrary, the fuel tax is still a viable source of revenue, and can continue to be the primary source of funding for highways for many years. However, the rate of taxation must be adjusted to account for inflation and fuel efficiency improvements. ATA supports an increase in the fuel tax rate, indexing of the tax rate, or a combination of the two. This is the most efficient and least harmful way to prevent a catastrophic collapse of the federal-aid highway program.

**CREATE A NEW HIGHWAY FREIGHT PROGRAM**

While more resources than are currently available will be necessary to fund the transportation improvements needed to get our country out of traffic gridlock, and to make driving less hazardous, we can no longer afford to spend federal resources on projects that do not meet our most important national needs. When the federal highway program was created, it had a clearly defined mission: to finance construction of the Interstate Highway System. When that mission was complete, highway user revenues were still flowing into the Highway Trust Fund, but Congress did not identify a new federal role. As a result, the federal-aid highway program has evolved into a block grant program for states, without a clear purpose.

MAP-21 took several steps toward remedying this situation, and the authors deserve credit for inserting language requiring recipients of federal aid to meet performance standards, including those related to freight transportation, and for ordering an identification of those highways essential to goods delivery. While MAP-21 did provide a greater federal share for certain freight projects, tight transportation budgets have

[7] American Society of Civil Engineers, *2013 Report Card for America's Infrastructure*, 2013.

greatly curtailed construction of new capacity, and it is unlikely that the bottlenecks identified under MAP-21 provisions will be funded with a greater priority than they were prior to the bill's passage. Therefore, ATA strongly recommends that Congress set aside money specifically for funding projects to eliminate bottlenecks identified under Section 1115 of MAP-21. The highest priority should be given to bottlenecks on the Primary Freight Network. A study for FHWA[8] identified the highway bottlenecks that cause the greatest amount of delay for trucks. Based on the agency's estimates, ATA calculates that these bottlenecks cost the trucking industry approximately $19 billion per year in lost fuel, wages, and equipment utilization. The study estimated that highway bottlenecks account for 40% of congestion.

ATA also recommends dedicating a greater share of the federal-aid highway program to the newly expanded National Highway System, which carries 55% of all traffic and 97% of truck freight. Additionally, the NHS carries 98% of the value of truck trade with Canada and Mexico.[9]

**SOURCES OF FUNDING**

Trucking companies are willing to support an increase in the fuel tax if the revenues are dedicated to projects and programs that will benefit goods movement on the nation's highways. While we understand that a fuel tax increase is difficult for some Members to support, the fact remains that no other source of funding has been identified that –

- will produce the level of revenues needed to meet current and future highway infrastructure needs;
- is easy and inexpensive to pay and collect;
- has a low evasion rate;
- is tied to highway use; and
- does not create impediments to interstate commerce.

Private financing of highway infrastructure can play only a very limited role in addressing future transportation needs, and certain practices may generate unintended consequences whose costs will vastly exceed their short-term economic benefits. In particular, ATA is very concerned about attempts by some states to carve up the most important segments of the Interstate System for long-term lease to the highest bidder. Leasing existing Interstate highways to private interests is inconsistent with the efficient and cost-effective movement of freight, is not in the public's best interest, and represents a vision for the Nation's transportation system that is short-sighted and ill-conceived. And to be blunt, privatization is the easy way out for politicians who want to avoid the tough decisions about raising user fees. We therefore oppose these schemes.

We are also concerned about the emphasis on TIFIA and other financing instruments. While they can be helpful under certain circumstances, they are not a substitute for "real"

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[8] Cambridge Systematics for the Federal Highway Administration, *Estimated Cost of Freight Involved in Highway Bottlenecks*, Nov. 12, 2008.
[9] U.S. Department of Transportation FY2014 Budget Highlights, April 2013.

money. In fact, these types of mechanisms simply shift more of the burden for funding transportation from the federal to state and local levels since most of the financing costs must come from a non-federal source. It is important to keep in mind that projects which receive assistance under these types of programs will still require a "real" money funding source to pay back the principal, interest, and associated fees.

ATA is strongly opposed to tolls on existing Interstate highway capacity. While federal law generally prohibits this practice, Congress has, over the years, created a number of exceptions. Imposing tolls on existing lanes of the Interstate System would have a devastating effect on the trucking industry. The industry is highly competitive and tolls usually cannot be passed along to shippers. Furthermore, tolls cause diversion of traffic to alternative routes, which are usually less safe and were not built to handle the additional traffic. We urge Congress to eliminate the existing pilot programs which provide tolling authority for existing Interstate Highways and to refrain from authorizing additional tolling flexibility.

Finally, ATA has serious concerns about mileage-based user fees. While we recognize that in the future a replacement for the fuel tax as the primary source of revenue for highway funding will be necessary due to changes in vehicle technology, that future is likely two decades away at least. It is important to understand that passenger vehicle fleet conversion will precede commercial vehicles' transition from internal combustion engines by many years. Therefore, it would be illogical to require trucks to transition to a mileage-based fee before passenger vehicles.

Currently available options for implementing vehicle miles traveled fees are limited, and these options have extremely high collection costs, and will experience a very high level of evasion. A mileage-based fee would also be inefficient and very difficult to administer. Collection costs for the federal fuel tax are less than 1%.[10] Collection costs for Germany's truck VMT tax system, currently the most sophisticated VMT tax in the world, are approximately 23% of revenue.[11] Since the fee is imposed almost exclusively on the Autobahn, which has the greatest volume of traffic, and Germany's user fee rates far exceed levels that would be acceptable to U.S. drivers, this should be considered a conservative figure.

While it can be argued that technological advances and economies of scale will eventually bring costs down, the cost of administering the system will never come close to the cost of collecting the fuel tax. The fuel tax is collected from a few hundred taxpayers, while the VMT fee would have to be collected from tens of millions of individual taxpayers for each vehicle. In 2011, there were nearly 245 million registered vehicles in the U.S. Therefore, a bureaucracy would have to be established to deal with the same number of individual accounts. Compare this with the IRS, which processes less than 180 million tax returns each year. The physical and bureaucratic infrastructure necessary to effectively collect a VMT fee would have to be massive and the cost to both

[10] Transportation Research Board NCHRP Report 689, *Costs of Alternative Revenue-Generation Systems*, 2011.
[11] *Ibid.*

government and taxpayer would be enormous. Furthermore, because a VMT fee would have to rely on technology for monitoring and collection, significant enforcement challenges resulting from system tampering and equipment malfunction should be expected.[12]

The challenges facing fuel tax revenue over the next 20 years can be addressed by indexing the rate. Substituting an untested, highly inefficient revenue collection mechanism for an efficient revenue mechanism that is already in place would be illogical and irresponsible, and would receive significant resistance from the trucking industry and other highway users.

**IMPROVE THE MOVEMENT OF INTERMODAL FREIGHT**

While the vast majority of truck freight does not move as part of an intermodal delivery, intermodal freight is an important and growing part of the supply chain. It is also where significant bottlenecks occur.

ATA, along with our partners representing other modes, has long advocated for dedicated funding of last-mile intermodal connectors: those parts of the highway system that link ports, rail intermodal terminals and airports with the National Highway System. Many of these links have been described as "orphan roads" because while they are critical segments of the freight transportation system, they are often overlooked by the state or local governments responsible for them because many of their benefits accrue far beyond their borders.

Another barrier to the efficient movement of intermodal freight has to do with the condition and safety of chassis. Legislation introduced in this committee and enacted by Congress in 2005 established a statutory framework requiring intermodal chassis providers to ensure that their equipment (which is integral to the movement of millions of international freight containers transported in the intermodal sector each year) was in a safe "roadable" condition before it is used for transport. ATA's Intermodal Motor Carriers Conference (IMCC) was actively engaged in the Roadability legislative and regulatory negotiations, and the consensus statutory language that developed was embodied in section 4118 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

Unfortunately, implementation of the law has been slow, and overall compliance with the program's key legal mandates has not yet reached a level where the chassis that are moving on the highway system can be considered to be systematically maintained and repaired, and are in a roadable condition, as the law requires. The lack of roadable equipment slows down the movement of intermodal freight when equipment is taken out of service or drivers are forced to select new equipment when they fail a pre-trip inspection.

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[12] Texas Department of Transportation. *Vehicle Mileage Fee Primer*, p. 16. Dec. 2009.

Moreover, intermodal drivers are now being charged during roadside inspections with equipment violations on the chassis that we believe should instead be assigned to the equipment provider, who is now supposed to be the responsible party. As a result of these regulatory enforcement practices, intermodal motor carrier/driver CSA scores are negatively and unfairly inflated by chassis deficiencies. With rising scores, we are beginning to see drivers leave the intermodal transport side of the business in order to avoid having their scores elevated by chassis deficiencies. This is exacerbating the intermodal driver shortage problem.

This failure to achieve the law's mandates is in large part due to FMCSA's decision to not require the driver's pre-trip chassis inspection to be documented and to not aggressively audit equipment provider operations to ensure that systematic maintenance and repair programs are in place. The only way to generate data on whether an equipment providing facility has an effective systematic maintenance and repair system, as required by law, is to document the driver pre-trip inspection, which is done when the provider first makes the chassis available for use. Since that data is not now being collected, we believe the agency does not have the requisite equipment provider system performance records needed to perform the required Roadability audits to actually measure and evaluate program performance. This lack of measurable progress has gone on for far too long. We urge you to review the chassis Roadability program, and work with FMCSA to ensure that the statutory changes that Congress put in place in 2005 are being implemented effectively.

**AUTHORIZE THE USE OF MORE PRODUCTIVE TRUCKS**

In addition to well-maintained, less congested highways and bridges, the trucking industry needs to improve its equipment utilization if it is to meet current and future demands. The United States has the most restrictive truck weight regulations of any developed country. At the same time, America's freight transportation demands are greater than that of any other nation, and we have the world's most well-developed highway system. Restrictive federal regulations governing the length and weight of trucks prevent the industry from operating its cleanest, safest, most efficient equipment.

Research demonstrates that more productive trucks can be as safe as or safer than existing configurations. [13] Furthermore, because fewer truck trips will be needed to haul a set amount of freight, crash exposure – and therefore the number of crashes – will be reduced.

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[13] See for example: Campbell, K.L., *et al.*, "Analysis of Accident Rates of Heavy-Duty Vehicles," University of Michigan Transportation Research Institute (UMTRI), Report No. UMTRI-88-17, Ann Arbor, MI, 1988.; Transportation Research Board, National Research Council, "Truck Weight Limits," Special Report 225, Washington, D.C., 1990; Cornell University School of Civil and Environmental Engineering, "Economic and Safety Consequences of Increased Truck Weights," Dec. 1987; Scientex, "Accident Rates For Longer Combination Vehicles," 1996; Woodrooffe and Assoc., "Longer Combination Vehicle Safety Performance in Alberta 1995 to 1998," March 2001; International Transport Forum, "Moving Freight with Better Trucks," 2010.

More productive vehicles would also produce important environmental benefits by reducing vehicle miles traveled, fuel consumption, and greenhouse gas emissions. Use of these vehicles could result in a fuel usage reduction of up to 39%, with similar reductions in criteria and greenhouse gas emissions.[14]

In addition, adding more weight can lower pavement costs.[15] Bridge costs can be minimized through effective bridge management, such as load posting bridges that are not designed for the additional weight, strengthening bridges where necessary, or replacing structures where it makes economic sense.[16]

Furthermore, Mr. Chairman, independent research predicts a net positive economic return from increased trucking productivity. A U.S. Department of Transportation study found that shipper costs could come down by as much as 11%.[17] A study by Oak Ridge National Labs concluded that the use of certain vehicles could reduce a shipper's logistics costs by between 13% and 32%.[18] These savings are ultimately passed on to the consumer in the form of lower shelf prices. Furthermore, the U.S. has the lowest national weight limits of any developed country.[19] This puts American businesses at a disadvantage, and makes it more difficult for them to compete with companies in other nations. In order to take advantage of the benefits that productivity increases can deliver, Congress must reform its laws to give states greater flexibility to change their size and weight regulations, and should also modernize vehicle length standards.

We understand that Members may be reluctant to support changes to size and weight law until the MAP-21 study is released. However, there are hundreds of research reports already completed which support our proposals, and one more study will simply bolster the reforms we are proposing.

**MODAL COMPETITION**

Some have speculated that significant shifts in modal share would occur if size and weight limits increased or if the freight railroads were subsidized or given additional marketplace advantages through regulatory change, or if current regulations designed to protect their marketplace advantage were amended. This is a fallacy. Railroads and trucking companies serve very different markets, and rarely compete for freight. As the

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[14] American Transportation Research Institute, *Energy and Emissions Impacts of Operating Higher Productivity Vehicles, March* 2008.

[15] See for example: U.S. Department of Transportation. *Comprehensive Truck Size and Weight Study.* Washington D.C. August 2000.; Transportation Research Board. *Regulation of Weights, Lengths, and Widths of Commercial Motor Vehicles. Special Report 267.* Washington D.C. 2002.

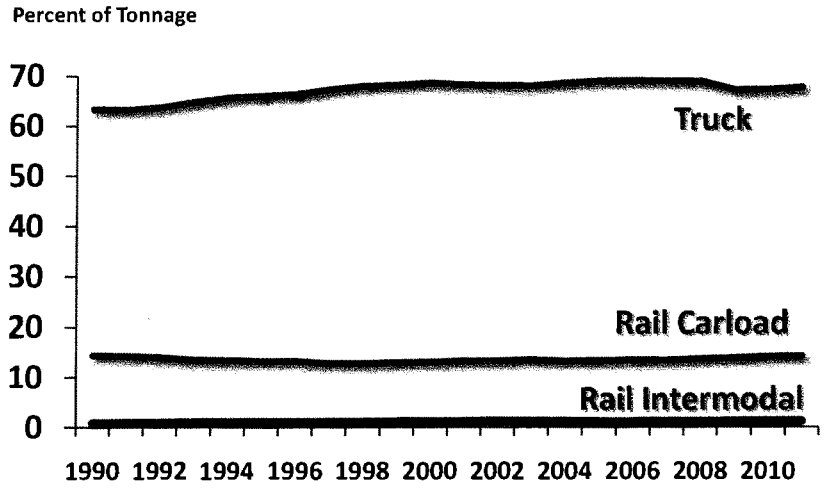
[16] Transportation Research Board. *Regulation of Weights, Lengths, and Widths of Commercial Motor Vehicles. Special Report 267.* Washington D.C. 2002.

[17] U.S. Department of Transportation. *Comprehensive Truck Size and Weight Study.* Washington D.C. August 2000.

[18] Center for Transportation Analysis Energy Division, Oak Ridge National Laboratory, *The Productivity Effects of Truck Size and Weight Policies,* Nov. 1994.

[19] International Transport Forum, *Moving Freight with Better Trucks*, 2010.

chart below shows, over the past two decades, through economic booms and busts, significant swings in energy costs, and the so-called "rail revolution," market shares have been very stable. Neither greater trucking productivity, nor incremental improvements in rail intermodal service, is likely to change this reality.




**Source:** ***U.S. Freight Transportation Forecast to 2023***

In fact, even if intermodal rail service volumes were to grow far more rapidly than projections, the impact on truck traffic would be virtually imperceptible, and would have, effectively, no impact on highway safety, emissions, or infrastructure maintenance and construction costs. In fact, even if rail intermodal volumes grew at twice the rate of projections over the next decade, the trucking industry's market share would dip by just 1%. A tripling of intermodal volumes would reduce truck market share by just 2%. Under both scenarios, truck market share would actually increase compared with today because trucks are expected to gain market share over this time period.

What we do know is that all modes are likely to see increases in demand. By 2023 Class 8 trucks will move 76% more freight tonnage with 36% more vehicles. Meeting this challenge will be exceedingly difficult without a much greater, more strategic public investment in the highways that carry significant truck volumes, and a regulatory environment which allows for improved efficiencies. Obstructing trucking efficiency improvements by continuing to limit the industry's productivity with size and weight regulations that are unsubstantiated by science will not support an expanded economy or meet a growing population's needs.

We would also like to note that ATA members, including Werner Enterprises, are significant users of rail intermodal service, and trucking companies are among the railroads' largest customers. We find the railroads' opposition to improvements in trucking productivity to be counterintuitive given the already discussed market share

data, the level of cooperation between the modes in the rail intermodal space, and the importance of trucking capacity to the current and future success of the intermodal market. Enhancing the productivity of trucks will benefit both rail intermodal and truck-only deliveries, and the ultimate result will be fewer emissions, less congestion and less crash risk to motorists as the number of trucks on the road comes down.

**CONCLUSIONS**

Mr. Chairman, thank you for the opportunity to offer our views on how, collectively, we can further improve truck and highway mobility. A strong federal highway program is necessary to achieve these goals, and significant additional resources must be made available to this purpose. We look forward to working with you to find the necessary resources to support the highest possible funding levels. However, even under the best scenario, funding will likely continue to fall well short of what is necessary to simply maintain the highway system, let alone tackle growing congestion. In the absence of new resources, the federal program should be reformed to ensure that revenues are invested in critical projects that serve the national interest. Furthermore, outdated size and weight regulations can and should be changed to improve the efficiency of our highway system.

# OVERVIEW OF THE UNITED STATES' FREIGHT TRANSPORTATION SYSTEM

TESTIMONY BY:

JAMES I. NEWSOME, III

SOUTH CAROLINA PORTS AUTHORITY

APRIL 24, 2013

My name is Jim Newsome and I am President and CEO of the South Carolina Ports Authority, based in Charleston, SC. I have held this position since September, 2009, being now only the fifth CEO of that organization, which is a major operating port owned by the state of South Carolina. Prior to taking this position, I had an over 30 year career as a senior executive in the ocean container shipping industry, most recently as the President of the Americas for Hapag-Lloyd Container Linie, a large, German shipping company for which I worked for twelve years. Before that, I was the President of the Americas for Nedlloyd Lijnen, BV, a Dutch container shipping company which is now part of Maersk Line . I was born into a shipping family in Savannah, GA, my father having been a senior executive at the Georgia Ports Authority for over twenty-years. I decided at a young age to pursue a shipping career, choosing a transportation and logistics education at the University of Tennessee, from where I received a MBA in this major in 1977.

I am honored to have the opportunity to testify before this Special Panel with regard to its consideration of the subject of U.S. Freight Transportation. Given my background as a senior executive in the global container shipping and port industry, I will confine my remarks to the connectivity of this important sector to this transportation system.

The container shipping industry has been instrumental in the significant growth of globalization over the last 25 years. There are at least fifty ocean carriers who transport containerized cargo between U.S. ports and ports in foreign countries. Thus, U.S. shippers enjoy a very competitive market for ocean transportation. The service provided for containerized cargo is remarkably reliable, largely weekly in nature in major trades, and has supported the establishment of

complex import and export supply chains routinely utilized by major U.S. corporations in their global transactions. Finished products also move on specialized carriers such as those operating roll-on, roll-off vessels for the movement of set-up vehicles and breakbulk and heavy lift carriers hauling non-containerized goods. There is also a significant cadre of bulk vessels used in the haulage of basic products such as grain, coal, and oil serving the U.S. market.

It also should be noted that ports face significant competition. Charleston, for example, aggressively competes with Savannah, Norfolk, New York and others for cargo. Ocean carriers have a choice of where to call and when. If a port is unable to provide an efficient and cost effective option, its customers will go elsewhere. Indeed, U.S. ports are facing increased competition from ports in Canada and Mexico. The prospect of heightened competition between East and West Coast ports as a result of the Panama Canal expansion is well-chronicled in current industry dialogue.

Globalization and the offshoring of significant amounts of manufacturing have led to the growth in trade being significantly more than economic growth, a factor known as the trade growth multiplier on economic growth. In recent years, largely fueled by import growth, this factor has been as high as three to four times economic growth, leading to a significant trade deficit for our country. In the last five years, however, the prevailing trend has been an exporting and manufacturing renaissance from the U.S. centered on the growth of a significant middle class in emerging economies, mainly China, the desirability of American agriculture products in such markets, and the rebirth of U.S. manufacturing in such vital areas as automotive manufacturing. This manufacturing and exporting trend shows signs of further accelerating due to the ready

availability of domestic energy sources to support such manufacturing. The idea of doubling exports as articulated by the Obama administration seems to have been a worthy and timely goal. A German company which manufactures in South Carolina, BMW, is now the largest single exporters of automobiles from the U.S.

The global shipping industry, especially the container carriers, has responded with significant investment in new vessels. 2013 will see the largest injection of new container capacity into the global container fleet in the history of containerization. The global container vessel fleet now numbers over 5,000 vessels with 16 million TEU of standing capacity. Eighty percent of the container ship capacity on order is bigger than can go through the Panama Canal today and, by the time the Panama Canal is expanded in 2015, fifty percent of the container ship capacity in operation will be Post-Panamax in size. A typical post-Panamax container ship is 8,000 to 9,000 TEU in size, carries 100,000 metric tons of cargo in containers, is over 1,000 feet long, has over 150 feet of air draft, and draws 48 feet of water when fully loaded with heavy export cargo. These large ships bring dramatic improvements in both economic and environmental efficiency. They require reliable ports at origin and destination to realize these benefits, capable of handling such ships productively and with minimal waiting due to depth or height restrictions.

Ports across the country have made and continue to make significant investment in order to satisfy such requirements. For example, in the Port of Charleston, we are investing $1.3 billion in the next ten years in existing and new facilities to handle mainly cargo growth. The largest component of this investment is in a new, 280 acre container terminal at the former Navy Base in Charleston. This terminal alone is an $800 million investment and is today the only permitted,

new container terminal on the East and Gulf Coasts of the United States. We are also building an innovative, rail-served inland port in Greer, SC, designed to improve connectivity between one of the Southeast's major manufacturing and distribution hubs and the Port of Charleston. The State of South Carolina is additionally investing another $700 million in port-related infrastructure, including a dedicated access road to this new container terminal. In view of the uncertainty with regard to the availability of federal harbor deepening appropriations, the State of South Carolina has set aside the entire $300 million cost of our deepening project, ie both the state and the federal share. Our deepening project is designed to provide a 50 foot harbor comparable to others already authorized on the East Coast, allowing the handling of ships at 48 feet of draft without tidal restriction, and at half the cost of other comparable deepening projects. These investments represent an "all-in" bet on the future of the Southeast region, the growth of manufacturing and exports, and the dramatic trend toward deployment of large container ships. They are indicative of the strategic role that ports play in the economic development of the Southeast region and our country.

Understanding that the U.S. port system and container shipping operations are a vital support component of our nation's freight transportation system and despite the investment at the federal state and local level, the federal harbor system has not kept pace with the dramatic increase in size of ships. I would note for the panel that foreign ports are widely recognized to have more capability in this regard than U.S. ports. There are ten ports in China today which handle over 5 million TEU, the largest being Shanghai which handles over 31 million TEU per annum. Going forward, it is vital that a viable strategy and process is established at the federal level to bring

port capability in line with the handling requirements for such large ships. This is a prime responsibility of the federal government as these are federal harbors.

The building of such large container ships has been ongoing for almost 15 years, since the late 1990/s. As I mentioned earlier, ports have invested in terminal facilities to accommodate anticipated and realized trade growth. Yet, the process for studying and funding harbor improvements and other restrictive infrastructure issues such as low bridges has neither been timely, predictable, nor well-funded. These issues should be addressed in a Water Resources Development Act, such as the legislation being contemplated in 2013. However, there have been only two WRDA bills signed into law since the Year 2000, one in 2000 and one in 2007. These two bills increased the federally authorized depth of only three deep draft harbors, only one of which was a major container port. On the appropriations side, only slightly more $2 billion has been made available for harbor deepening since 2000, most of which is for the deepening of the port of New York/New Jersey, a very meritorious project. The legislative process for approval and funding of major port projects has also been made more difficult by the demise of the federal earmark – a traditional source of funding for such projects. Accordingly, the funding, is woefully short of the requirement and commitment needed to modernize the U.S. port network and is an impediment to future freight mobility. Additionally, the civil works process to study and execute such deepening and other major port infrastructure projects has expanded in some cases to almost twenty years, failing to keep pace with the dramatic increase in vessel size and creating another impediment to future freight mobility. As with other major transportation projects, harbor deepening, maintenance and infrastructure improvements should

be treated as high priority projects subject to streamlined approval and with a steady and reliable stream of funding.

The good news is that the shortcomings of the harbor improvement process seem to be well-recognized and some improvements are at hand. The U.S. Army Corps of Engineers has proactively developed new process guidance (the so-called 3-3-3 directive or Smart Planning) to speed up the study of such port infrastructure projects. They have issued a first-step paper relative to formulating a cogent strategy for prioritizing harbor improvements. But, sustainable improvement will only be realized when a "private sector" type capital budgeting approach is taken to such port improvement projects, entailing the following major components:

- The establishment of a significant and predictable capital budget to address U.S. harbor shortcomings over multiple years.

- The development of a clear system of prioritization for projects relative to cost/benefits and the achievement of requisite capability in harbors, which means ability to handle fully loaded ships without tidal restriction.

- A rule-based authorization system for ports which takes the place of individual authorizations when a certain cost/benefit hurdle is met.

- The recognition, potentially painful, that all ports cannot be deepened with the current federal resource constraints and that there will be winners and losers in a prioritization scenario.

- Longer-term, the need to find a user fee system to cover harbor improvements as now exists for harbor maintenance.

- The need to consider related projects in ports which create limitations, such as the Bayonne Bridge in New Jersey and the Gerald Desmond Bridge in Long Beach.

I earnestly commend the attention of this Panel and the full Committee to this important infrastructure priority, without which the benefits of exporting and manufacturing growth cannot possibly be realized. Thank you for this opportunity and I will be happy to answer any questions that you may have.

*A bold voice for transportation workers*

**WRITTEN STATEMENT OF**
**EDWARD WYTKIND, PRESIDENT**
**TRANSPORTATION TRADES DEPARTMENT, AFL-CIO**

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**BEFORE THE HOUSE COMMITTEE ON TRANSPORTATION AND INFRASTRUCTURE PANEL ON 21ST CENTURY FREIGHT TRANSPORTATION HEARING**
**ON**
**"OVERVIEW OF THE UNITED STATES' FREIGHT TRANSPORTATION SYSTEM"**

**April 24, 2013**

Chairman Duncan, Congressman Nadler, and members of the Panel on 21st Century Freight Infrastructure, thank you for the opportunity to testify today on the importance of freight transportation.

As the President of the Transportation Trades Department, AFL-CIO (TTD), I am honored to speak on behalf of workers who make freight transportation possible. By way of background, TTD consists of 33 affiliated unions that represent workers in every mode of transportation including those engaged in the movement of freight.[1] Without transportation workers, goods would travel only as far as consumers would be willing to drive, imports and exports would never arrive at or leave our docks, and raw materials needed by our manufacturing sector would never be received. As a result, the abundance of choices available to today's American consumers and businesses would dwindle, jobs would be slashed and our nation's presence as the leading force on the global field would vanish.

But through the work of the members we are proud to represent, the movement of freight becomes a reality. And because these workers have secured the benefits of collective bargaining, they earn a middle-class living, with good health care, retirement and other benefits, workplace safety protections, and an important level of job security for them and their families. These good jobs in turn support communities across the nation and drive our economy.

These members include many of the approximately 170,000 Americans who operate and maintain the freight railroad network, signal systems and equipment while transporting over a billion tons of cargo each year.

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[1] A complete list of TTD affiliates is attached.

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TTD unions also represent tens of thousands of maritime, longshore and warehouse workers employed on vessels that transport our freight and at docks in Hawaii, Alaska, the Great Lakes, major U.S. rivers, and along the East, West and Gulf coasts where they unload cargo. These workers play a vital role in the ability of the U.S. to export and import goods that fuel the world's most powerful economy.

Additionally, we represent virtually all aviation unions whose members operate, maintain and support air carrier operations – both the all-cargo carriers and the commercial passenger carriers that combined carry millions of tons of freight domestically and across the globe. So when you think of the nation's aviation employees – both air carrier employees and the men and women who work in and maintain our air traffic control system – they play a vital role in our complex freight transportation network.

Taken together, freight transportation workers helped move an estimated 12.5 billion tons of freight valued at more than $11.6 trillion in 2007. Compared to 10 years prior, this data reflect an increase of 13% in freight weight and 68% in freight value. Notably, the Department of Transportation projected that our national freight tonnage will increase almost 70% by 2020 with some freight gateways experiencing a tripling of freight volumes. This projected growth in freight volume will require leadership in Washington if we're serious about making sure our transportation infrastructure can keep pace.

We all know the facts. Our infrastructure is currently in a deplorable state of disrepair. In the World Economic Forum's 2012-2013 *Global Competitiveness Report* the U.S. ranked 25th in the world on the quality of its overall infrastructure. The fact that the world's strongest economy must function with an infrastructure that barely cracks the top 25 should worry government and business leaders. The 2013 report card issued by the American Society of Civil Engineers (ASCE) says it all. Our infrastructure received a cumulative grade of D+. ASCE rated our ports a 'C', our railroads 'C+', our roads 'D', and our aviation system a 'D', finding that underinvestment and deferred maintenance are undermining the state of our infrastructure.

Our economic strength is intrinsically linked to the condition of our transportation infrastructure. When channels are too shallow to receive large vessels, or railroads are located miles away from ports, unnecessary delays and congestion cause the flow of commerce to slow and cost our economy billions. As a result, our ability to compete in the international market and meet President Obama's goal of doubling exports by 2015 is undermined. Thus, the national discussion about the state of our freight transportation system isn't just another transportation policy debate; it's about providing American businesses the infrastructure they need to distribute their products to the rest of the world and ensuring the U.S. remains a dominant force in the global marketplace.

Fortunately, we have the opportunity to reverse years of underinvestment and neglect. There are plenty of good ideas that, if implemented will produce the resources needed to support a transportation network that reaches its potential, can keep pace with an expanding economy and is safe and efficient. What is missing is the political will to invest in such a system. While the private sector has a vital and necessary role to play in investing in our freight transport system, the government simply cannot abdicate its responsibility to properly fund this sector of our transportation system across all modes.

We can start by spending the money we take in each year through the Harbor Maintenance Tax (HMT). As this Committee knows, these funds are collected for the purpose of improving a vital link in our freight system: our ports and navigation channels. The U.S. Army Corps of Engineers estimates that 95% of our international trade travels through our ports, yet ASCE estimates that between now and 2020, our ports and inland waterways will require $30 billion of investments to meet their growing needs. This comes just as the expansion of the Panama Canal is approaching, when vessels and ships are increasing their size and trade volume at ports is expected to double. Many of our channels are already too shallow to allow vessels to pass through, and this problem will only worsen with the emergence of mega-vessels carrying heavier loads.

The $7 billion that has been accumulated and is sitting in the Harbor Maintenance Trust Fund should be invested in our ports to accommodate for the Panama Canal expansion and the realities of today's vessels. TTD is encouraged by this Committee's bipartisan interest, support and discussions regarding a Water Resources Development Act (WRDA) bill and specifically, HMT funding reform. We urge the Committee to work with the Senate and send a bill to the President that finally unlocks the HMT funds that are held hostage at the expense of the port/maritime sector and our economy.

Congress must also tackle the surface transportation funding crisis. As this Committee knows and as transportation labor has testified before, the Highway Trust Fund (HTF) spends $15 billion more than it receives each year and may become insolvent after Fiscal Year 2014. The demands on the HTF are tall, yet its funding source, the gasoline and diesel fuel tax, hasn't been increased since 1993 and its buying power has fallen 33%. The threat of insolvency must be addressed – the most straightforward way to do so is by increasing the gas tax and indexing it to inflation. It is time for our political leaders to tell the truth to Americans and businesses: unless we increase revenues flowing into the collapsing HTF – yes by raising the federal fuel user fee – our highways, bridges and public transit systems will fail us and our economy will crater.

We also recognize that as vehicles become more fuel efficient and the public increasingly drives alternative fuel vehicles, other revenue sources must be identified as well. We've supported other funding mechanisms to complement the gas tax, and we'd be interested in talking to the Committee and others regarding different options.[2]

[2] Attached is our 2013 Policy Statement "Options for Avoiding the Highway Trust Fund Cliff" that was adopted by the TTD Executive Committee in February 2013. It provides further detail on TTD's call on Congress to fix the HTF.

It comes as a shock to no one that our surface transportation infrastructure is failing our economy. Everyone here understands that there are viable funding solutions that will allow our country to boost investments and create hundreds of thousands of jobs along the way. However, there is a profound lack of political will in Washington to actually propose methods of addressing the funding shortfall. While we appreciate the strong message from lawmakers (many of whom serve on this Committee) about modernizing and expanding our transportation system, America needs real, viable funding options to be put on the table and enacted.

The tepid support found in the just unveiled Gallup Poll for raising the federal fuel tax and dedicating the funds for roads, bridges and mass transit should worry those on this Committee attempting to lead a national debate about the importance of investing in our failing transportation system. While data show that a majority of state transportation revenue initiatives are passing, this poll demonstrates that we are failing to paint an honest picture for the American people on the severe impact to our economy of continuing to neglect our severely aging infrastructure.

Enhancing funding for surface transportation programs will also support vital intermodal projects. As I mentioned earlier, we represent workers employed in an array of components and subcomponents of the freight transportation system. We understand better than most that in order for the U.S. to remain competitive, we need a robust, integrated system that connects ports, railroads and roads with each other and with cargo-carrying aircraft. Investing in intermodal facilities will connect the modes, reduce congestion, and decrease shipping time, which help make products more affordable to consumers and facilitate domestic and international trade. Congress must ensure that the needs of these facilities are considered as the expansion of freight transportation is debated and as legislation is crafted.

With regard to our aviation system, the FAA is in the midst of transforming our decades-old radar-based air traffic control system to a modernized satellite-based system that will employ new technologies to increase efficiency, expand capacity, reduce congestion and enhance safety. The air transport of freight, on both cargo and passenger aircraft, will benefit from the cost savings and capacity enhancements resulting from NextGen, allowing consumers and businesses to save as well. But unless Congress commits to appropriating the funds needed to fully implement this modernized air traffic system, freight transportation will suffer as well. The model used today – subjecting air traffic control modernization to funding fits and starts – isn't serving our nation's economic interests and is slowing progress on this vital initiative.

It is clear that greater federal investment is needed throughout our freight infrastructure systems to help our economy grow and prosper. Further, it is critical that we maximize the domestic economic impact of these investments by including strong Buy America provisions in any legislation authorizing the construction and maintenance of freight infrastructure. The application of and strong adherence to Buy America laws helps ensure that taxpayer dollars are spent here at home rather than sent overseas. The use of American-made steel, other raw materials and manufactured goods in any infrastructure investment serves as an economic multiplier by creating and sustaining American manufacturing jobs.

The role of the private sector in project delivery will undoubtedly be debated. We acknowledge that long-term transportation projects may require innovative financing and we understand that expanding the use of public-private partnerships (PPPs) may be proposed. The fact is that the private sector has always played a robust role in our transportation system and will continue to do so.

TTD continues to believe that PPPs have a finite role to play in the delivery of transportation projects, as PPPs cannot provide the revenue streams necessary to finance a national, intermodal transportation system. In other words, if we fail to solve the significant public funding issues, there will be limited opportunity to attract the private investment needed to execute more PPPs. I hear this point all the time from the private capital professionals: in order for private investors to come to the table, the dysfunctional federal policy regime that is failing to provide a reliable federal funding stream must be reversed.

As Congress considers the role of PPPs, we will make the case for rigorous initial cost-benefit analyses and clear accountability for the cost and quality of the work performed. Further, longstanding worker protections must be applied and rules that safeguard the rights of workers must be honored. PPPs and innovative financing measures cannot be used as a mechanism to eliminate collective bargaining rights or worker protections as part of a business model to increase profits at the expense of workers. If that is indeed the path that is taken, we will oppose those efforts and the political support for these types of projects and funding options will be fractured and weakened.

I would be remiss not to discuss the severe impact that sequestration is having on the transportation system and specifically on our freight network. Earlier this week, furloughs took effect for virtually every employee of the Federal Aviation Administration (FAA) and the delays and uncertainty that are plaguing air travel is massive and growing. While passengers are the most visible victims of these cuts, we know that air cargo will suffer from delays as well jeopardizing this important segment of our freight system. We also have to realize that we cannot responsibly talk about enhanced investments in freight transportation while allowing sequestration to arbitrarily cut vital programs across the board. Instead of continuing to play the blame game and point fingers at each other, Congress and the Administration need to work together to solve this problem, put FAA workers back on the job and stop the funding cuts before more harm is done to our country.

It is impossible to have a discussion on the role of our freight transportation system without acknowledging that there are a number of pending policy issues outside the funding challenges already noted that have a direct impact on this sector's ability to move cargo efficiently and safely.

For example, a viable U.S. maritime presence cannot be sustained without strong cargo preference laws that ensure U.S. cargo is transported on U.S. flag vessels. I must note that this law was weakened for U.S. food aid transports in the recently completed MAP-21 reauthorization – a law that previously had little to do with maritime commerce.[3] TTD and our affiliates are working to reverse this misguided departure from our cargo preference laws and to ensure that changes proposed for this program by the Obama Administration are not enacted.

There are also a number of freight rail safety issues that will be considered by this Committee as part of any reauthorization of the Rail Safety Improvement Act. Chronic fatigue issues left unresolved by the last law must be addressed, positive train control needs to be implemented, and we will oppose efforts to allow larger and heavier trucks on our nation's highways. We agree with the freight rail carriers that repealing certain antitrust rules for the industry would be a mistake as would new unfair economic regulatory requirements. These changes would harm the wages and jobs of workers employed in this industry and make it more difficult for rail carriers to invest in the infrastructure improvements sorely needed to improve freight transportation.

On the aviation side, we are committed to extending to pilots in the all-cargo sector the new fatigue rules that cover passenger carriers. We strongly objected to the Obama Administration's decision to completely exempt cargo pilots from the new regulations. Despite claims to the contrary, pilots who fly for cargo carriers suffer from the same fatigue issues as commercial passenger pilots and share the same air space. They should therefore be covered by the same fatigue rules. We support legislation introduced by Reps. Michael Grimm (R-NY) and Tim Bishop (D-NY) to close this regulatory loophole and we urge the Committee to consider and pass this legislation that improves the safety of this important sector of the freight transportation system.

We commend the Committee and Congress for the work you've done so far in placing greater priority on establishing a comprehensive freight system, and in particular for the freight provisions included in MAP-21 which will change the way we address freight transportation at the national and state levels. Among other freight-related requirements, MAP-21 called for the development of a national freight policy, national freight network, national freight strategic plan, and state freight advisory committees, which will produce a comprehensive approach to freight transport. By establishing and pursuing national freight goals, we can build a system that integrates our freight needs with states' needs and capabilities. In doing so, Congress established freight as an important aspect of our transportation system, and we applaud Congress for its work.

We also applaud the Administration for aggressively implementing the freight provisions of MAP-21. In February, the Administration announced the process for designating the national freight network and identified milestones for future progress. Additionally, the Administration created the National Freight Advisory Committee to advise the Secretary of Transportation on

[3] Attached is our 2013 Policy Statement "Reforms to Strengthen U.S. Maritime Cargo Preference Laws" that was adopted by the TTD Executive Committee in February 2013. It provides further detail on TTD's call for strong cargo preference protections.

issues relating to freight transportation planning and the implementation of the new freight provisions included in MAP-21. We believe this Advisory Committee is an important step in the Department of Transportation's efforts to develop an integrated, comprehensive approach to freight movement, and transportation labor looks forward to participating in its deliberations.

We are pleased to support this Committee's work to develop a comprehensive freight transportation policy framework. We share your view that without a renewed focus on freight transportation and the investments that are clearly needed, we will be missing the opportunity to boost America's competitiveness, create middle-class jobs that still elude too many Americans, and modernize the way our companies and people compete in the global economy.

We appreciate the opportunity to testify today and look forward to participating in the Panel's efforts to address the needs of the 21st century freight transportation system. Thank you.

**ATTACHMENT 1**

# *TTD MEMBER UNIONS*

*The following labor organizations are members of and represented by the TTD:*

*Air Line Pilots Association (ALPA)*
*Amalgamated Transit Union (ATU)*
*American Federation of Government Employees (AFGE)*
*American Federation of State, County and Municipal Employees (AFSCME)*
*American Federation of Teachers (AFT)*
*Association of Flight Attendants-CWA (AFA-CWA)*
*American Train Dispatchers Association (ATDA)*
*Brotherhood of Railroad Signalmen (BRS)*
*Communications Workers of America (CWA)*
*International Association of Fire Fighters (IAFF)*
*International Association of Machinists and Aerospace Workers (IAM)*
*International Brotherhood of Boilermakers, Iron Ship Builders, Blacksmiths, Forgers and Helpers (IBB)*
*International Brotherhood of Electrical Workers (IBEW)*
*International Longshoremen's Association (ILA)*
*International Longshore and Warehouse Union (ILWU)*
*International Organization of Masters, Mates & Pilots, ILA (MM&P)*
*International Union of Operating Engineers (IUOE)*
*Laborers' International Union of North America (LIUNA)*
*Marine Engineers' Beneficial Association (MEBA)*
*National Air Traffic Controllers Association (NATCA)*
*National Association of Letter Carriers (NALC)*
*National Conference of Firemen and Oilers, SEIU (NCFO, SEIU)*
*National Federation of Public and Private Employees (NFOPAPE)*
*Office and Professional Employees International Union (OPEIU)*
*Professional Aviation Safety Specialists (PASS)*
*Sailors' Union of the Pacific (SUP)*
*Sheet Metal, Air, Rail and Transportation Worker (SMART)*
*Transportation Communications International Union (TCU)*
*Transport Workers Union of America (TWU)*
*UNITE HERE!*
*United Mine Workers of America (UMWA)*
*United Steel, Paper and Forestry, Rubber, Manufacturing, Energy, Allied Industrial and Service Workers International Union (USW)*
*United Transportation Union-SMART (UTU-SMART)*

*April 2013*

ATTACHMENT 2

*A bold voice for transportation workers*

## OPTIONS FOR AVOIDING THE HIGHWAY TRUST FUND CLIFF

While Washington obsesses over the so-called "deficit crisis," the reality is that America has a jobs and transportation infrastructure crisis, a product of decades of neglect and indifference by policymakers. This crisis reaches into every sector of our transportation system and we are committed to its reversal.

The most significant barrier to restoring America's surface transportation infrastructure is a broken and outdated funding system as politicians from both parties have been all too willing to postpone difficult choices. This "kick the can down the road" approach may have been politically expedient or even necessary in the short-term, but the consequences have been devastating to our transportation system and our economic competitiveness. If Washington gridlock kills serious proposals to fix our surface transportation funding mechanisms, millions of jobs will be at risk and the already alarming deterioration of our freight and passenger transportation systems will only worsen.

Projections tell us that at the current rate of investment, the U.S. will spend $1.1 trillion below what is needed between now and 2020. Sadly, at this rate it would take almost 80 years to complete the transit projects that are currently on the books. And with the projected insolvency of the Highway Trust Fund (HTF) in 2015 – sort of a "mobility cliff" staring us in the face – there is no more time for brinksmanship.

The HTF provides financing for public transportation and road and bridge construction. Until recently, the HTF was funded primarily by the assessment of federal excise taxes of 18.4 cents per gallon on gasoline and 24.4 cents per gallon on diesel fuel. These user fees were never indexed for inflation and as a result, their buying power has fallen 33 percent since they were last increased in 1993. No nation in the world can run a 2013 surface transportation system on a 1993 budget.

In the early 1990s, the per gallon charge accounted for 17 percent of the cost of a gallon of gas, but today it represents only about 5 percent of the per gallon assessment. This decrease in buying power has caused the HTF to pay out more than it takes in. As a result, the HTF now spends $15 billion more than it receives each year, and every state received more in funding than it contributed in the years between 2005 and 2009. To fill this funding gap, over $40 billion has been injected into the HTF from the General Fund since 2008. The Congressional Budget Office recently projected that the trust fund would be able to meet its obligations through the end of fiscal year 2014, but after that it may be insolvent. Without any reforms to the revenue stream, the Highway Account would incur a $365.50 billion deficit over the next 23 years.

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Exacerbating the HTF's underfunding is that the date of its anticipated insolvency coincides with the expiration of MAP-21, the surface transportation reauthorization legislation signed into law in 2012. Although MAP-21 did provide needed stability in trust fund expenditures, Congress was unable to agree on a sustainable and long-term solution to address the shortfall in the HTF. When MAP-21 expires, however, it will no longer have that luxury. If the HTF is allowed to become insolvent in fiscal year 2015, annual federal investments for transit would drop from $11 billion to $3.5 billion and for highways these payments would plummet from $40 billion to $4.5 billion. Allowing these programs to fall over this cliff would kill most planned projects and threaten millions of jobs. Clearly, Congress cannot delay any longer. An answer must be found.

The simplest solution to the threat of insolvency is to increase the gas tax and index it to inflation. The gas tax has a long bipartisan history. It was Ronald Reagan who defended a gas tax increase by saying, "Our country's outstanding highway system was built on the user fee principle – that those who benefit from a use should share in its cost." And in 2009, the bipartisan National Surface Transportation Infrastructure Financing Commission proposed a 10-cent increase in the gasoline tax, a 15-cent hike in the diesel tax and indexing each tax rate to inflation. This approach has been endorsed by the labor movement and businesses of all sizes. Yet to date, anti-tax zealots and extremists who clearly fail to understand how America maintains and modernizes its transportation system have managed to stop any progress.

One approach to the problems of insolvency and increasing trust fund revenues would be to include a gas tax hike in a deficit agreement. A gas tax increase has been incorporated into debt relief packages on several occasions. In late 2010, as a part of the contemporary discussion of this issue, the Simpson-Bowles Commission recommended increasing the gas tax by 15 cents per gallon over three years and dedicating the revenues to fund transportation. These types of negotiations may be the most appropriate forum for addressing the HTF shortfall.

In the absence of an agreement to increase the gas tax, we recognize that other approaches may be necessary. One recent proposal, offered by John Horsley, the former Executive Director of the American Association of State Highway and Transportation Officials, would replace the current excise tax with a sales tax. This would require the conversion from a flat per gallon rate (that is, 18.4 cents for each gallon of gasoline) to a per dollar percentage. The specific percentage of such a tax would be set at a level sufficient to provide $350 billion in funding for highway and transit programs over six years. The end result for drivers would be about $1 per week for each vehicle. This assessment is structured to ease the pain on consumers, would not change the trust fund's user fee structure and would continue to be pegged to the price of fuel. Without an increase in the gas tax as currently structured, we encourage Congress and the White House to give this proposal serious consideration.

Over the longer term, other revenue sources must also be identified. With increased fuel efficiency standards going into effect, by 2025 cars and light trucks will be required to average 54.5 miles per gallon. Additionally, many consumers and producers are moving to alternative fuel vehicles powered by electricity and natural gas. As a result, the current revenue structure for the HTF will need to shift away from one that is predicated on the consumption of gasoline and

diesel fuel. Several longer term options are available. We believe those that continue to be based on user fees are preferable to those that do not. However, these long-term revenue sources must be viewed as complements to an adjustment in the gas tax. They cannot serve as a way to avoid important decisions on looming trust fund revenue needs over the next few years.

A vehicle miles traveled (VMT) fee would provide trust fund revenue by assessing a charge to roadway users for each mile they drive. It is the most thoughtful revenue proposal that is not directly linked to fuel consumption. Like the gas tax, the VMT assesses fees to roadway users, which preserves the user fee model for surface infrastructure investment touted for decades by presidents in both parties. VMT has been endorsed by an array of commissions, including the National Surface Transportation Infrastructure Financing Commission. Differing assessments could be levied on various vehicle types, with trucks and other heavy vehicles being assessed higher charges because of the additional wear they cause on roadway surfaces. Further study may be necessary before full implementation of this approach and such evaluations should focus on easing public concerns regarding privacy and equitable fee assessments. Additionally, commercial driver's license holder protections should be provided, similar to those offered for electronic onboard recorders.

Innovative finance initiatives could also help fund certain transportation projects but are not a substitute for real action to address the chronic underfunding of the HTF. Of course, how these initiatives are implemented is extremely important given the public and employee interest issues that have surfaced over the years. At a minimum, any innovative financing proposal, including a federal infrastructure bank or a separate public private partnership, must apply Section 13(c) transit worker protections, Davis-Bacon prevailing wage rules, project labor agreements, public employee protections and Buy America requirements.

Creation of a federal infrastructure bank has received significant support and been an element of the President's vision for economic growth and infrastructure investment. Such a bank, if properly capitalized, could help to fund intermodal projects and those that affect large regions of the country by offering low-interest loans and loan guarantees. However, despite the rhetoric that one often hears about this topic inside the beltway, infrastructure banks do not replace the need to provide HTF revenue over the immediate or long term.

Public private partnerships (PPPs) are often lauded as an answer to many national infrastructure challenges; however, their implementation can be complicated and raise certain concerns that must be addressed. In essence, these transactions are billed as an opportunity to fund public infrastructure needs when public resources are scarce or inadequate. But of course not all forms of infrastructure can provide sufficient revenue to support this approach and the public interest must be carefully considered as private profits are extracted from public infrastructure. Those who promise job creation from a PPP should be held accountable and the jobs and rights of public employees must be protected. PPPs can have their place in the delivery of certain transportation projects but they must be carefully managed to ensure they are not used to weaken labor standards, eliminate public sector jobs or ignore the public interest.

As this debate unfolds, we will focus our energy on seeking a bipartisan political solution to the gridlock in Washington that is strangling our economy. Real policy solutions to the funding crisis faced by our surface transportation system do exist. What have been lacking are the political will to move forward and a serious commitment to fixing this systemic problem. TTD is committed to this effort and will make the case that funding our surface transportation system will create and sustain jobs, grow our economy and ensure our country can compete and win in the international marketplace.

**Policy Statement No. W13-01**
**Adopted February 24, 2013**

ATTACHMENT 3

*A bold voice for transportation workers*

**REFORMS TO STRENGTHEN U.S. MARITIME CARGO PREFERENCE LAWS**

U.S. government policy has long recognized the importance of a strong U.S. merchant marine to our national economy and global defense network. These policies and laws reflect the changing dynamics of the global maritime system, and are designed to promote the health and viability of a privately owned U.S.-flag fleet and the maintenance of a trained U.S. mariner workforce capable of meeting the U.S. government's sealift objectives. Most of this will be at risk if we fail to advance a sensible federal maritime policy.

The U.S.-flag fleet plays an important role in our national security, serving as a naval auxiliary in time of war or national emergency, in addition to being an economic engine capable of moving goods to and from our nation's shores. U.S.-flag ships have delivered the majority of the material to Operation Enduring Freedom/Operation Iraqi Freedom, and since 2009, U.S.-flag vessels have moved more than 90 percent of all the cargoes to Afghanistan and Iraq supporting U.S. and coalition forces. The success of our maritime policies is as important today as ever due to the fiscal constraints facing the U.S. and the burdens on our national defense across the globe.

Cargo preference statutes and other U.S.-flag shipping requirements are integral to the maintenance of a strong U.S.-flag fleet. These statutes ensure that U.S. Government-generated import and export cargoes move in substantial volume on U.S.-flag vessels. Cargo preference does not apply to the transport of purely private commercial export-import cargoes, but only to the movement of those generated by the U.S. government. While limited in scope, these policies are critically important to maintaining the merchant fleet necessary to meet our national goals. The U.S. is not alone in implementing such policies either, as it is the general practice of other maritime nations to move the vast majority of their government shipments in vessels of their own flag. We must continue to vigorously defend our national maritime interests.

Unfortunately, cargo preference laws have been hampered both by their loose application by federal agencies and recent legislative actions meant to undermine the goals of cargo preference. We oppose language that was inserted into last year's surface reauthorization law (MAP-21) that reduced the application of cargo preference for the Food for Peace program from 75 percent of government-generated cargo to 50 percent. This language was inserted in the dead of night, without consulting maritime labor or the U.S. maritime industry, and without even a single congressional hearing on the subject. The loss of cargo for U.S.-flag vessels could result in the loss of good middle class jobs for U.S. mariners and cause more than 16 privately owned ships to fly a foreign flag. The legislation strikes at the core of U.S. cargo preference laws and undermines the U.S.-flag fleet's ability to serve our national economic and security interests.

**Transportation Trades Department, AFL-CIO**

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Edward Wytkind, President /Larry I. Willis, Secretary-Treasurer

TTD strongly opposes this legislative action, and will work to prevent any further efforts to undermine U.S. cargo preference laws. In fact, we supported bipartisan legislation introduced in the 112th Congress by Reps. Elijah Cummings (D-MD) and Jeff Landry (R-LA), the Savings Essential American Sailors Act (H.R. 6170), that would have overturned the language in MAP-21 and restored the cargo preference requirement for Food for Peace cargo to 75 percent. We look forward to this legislation being introduced in the 113th Congress and will push for its swift passage.

Improvements to U.S. cargo preference laws do not stop in the halls of Congress as the Administration must vigorously enforce the laws throughout our government. In recent years, the applicability of cargo preference requirements to specific federal activities has been called into question. All too frequently federal agencies and departments have implemented them in ways that allow for only minimal compliance, missing an opportunity to further strengthen the U.S. fleet and its workforce.

The Administration's policy should reaffirm a commitment to fully adhere to cargo preference laws, and should give the Maritime Administration – the only federal agency tasked with promoting the U.S.-flag fleet – the resources and authority it needs to implement cargo preference throughout the federal agencies. The cargo preference laws are broadly written and should be broadly applied to federal activities without exception.

To further this goal, the Administration has an opportunity to maximize the use of U.S.-flag vessels. Some cargo preference laws require less than 100 percent of applicable government-generated cargo to be transported on U.S.-flag vessels, such as the 50 percent minimum for the international food aid program noted above. In these circumstances the minimum percentage required under law should be viewed as just that: a minimum. The goal for every federal agency should be to maximize their use of U.S.-flag vessels when shipping government-generated cargoes and 100 percent should be the clear objective.

The Maritime Administration must be given the authority to determine the applicability of cargo preference to various federal agencies. Agencies should work closely with the Maritime Administrator to implement regulations and guidelines necessary for the Administrator to fulfill his or her enforcement authorities granted by law (PL 110-417). Federal agencies should also provide the Administrator the data and statistics related to cargo preference activities in order to develop a pathway forward to maximize the use of U.S.-flag vessels. Finally, the Administrator should have sole responsibility, as provided by law, to issue waivers to cargo preference laws.

These reforms are not radical, nor are they burdensome. They will, however, provide necessary clarification about cargo preference laws, and allow the U.S. government to fulfill these laws in the spirit in which they were written.

The U.S.-flag fleet and its dedicated and highly trained workforce are an extremely important resource for our economic health and national security. In order ensure that the U.S.-fleet remains viable and effective in the global marketplace, cargo preference laws need to be strengthened by Congress and fully adhered to by our government.

**Policy Statement No. W13-02**
**Adopted February 24, 2013**

# The Steel Interstate System
## A 21st Century Railroad Network for the United States*

*Testimony for the Panel on 21st Century Freight Transportation, Committee on Transportation and Infrastructure, U.S. House of Representatives,

By A. L. Lotts, Director, RAIL Solution[1], 11125 Hatteras Drive, Knoxville, TN 37934

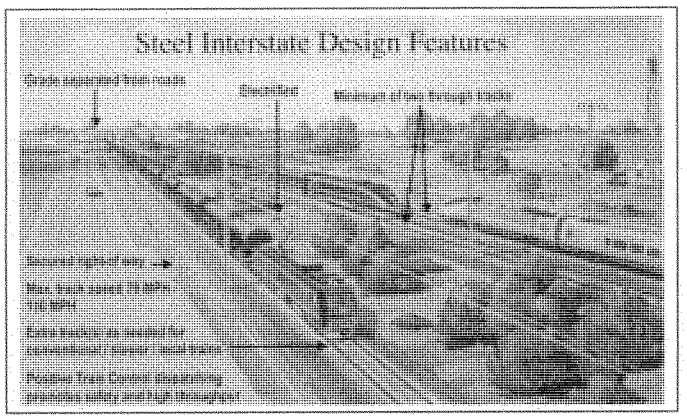
**Executive Summary**

The Steel Interstate System (SIS) is proposed as a modernized, privately-owned American core freight rail network. The SIS would employ currently available rail technology to allow the U.S to build capacity more than sufficient to fulfill future national freight requirements, operate more efficiently and reliably, utilize 100% domestically generated motive power, and achieve point to point speeds from 60 to 115 mph for various classes of freight and passenger trains.

As envisioned the national SIS would involve about 40,000 miles of high capacity, multi-line track built on present rights-of-way that parallel the existing highway interstate, as well as selective use of new track lines. Total cost, to be principally borne by the private sector is estimated to be $500-1,000 billion.

Higher efficiency and capacity of the national SIS can be accomplished by using the following technologies:

- *Electrified rail*, to permit interstate freight shipments powered by domestically-produced, and more efficient electric motive power, rather by liquid fuels derived from imported oil or natural gas.
- *Grade separation* similar to the U.S. Interstate System and the Washington Metro Line - the system would be designed to have no junctions with automotive roads, thereby

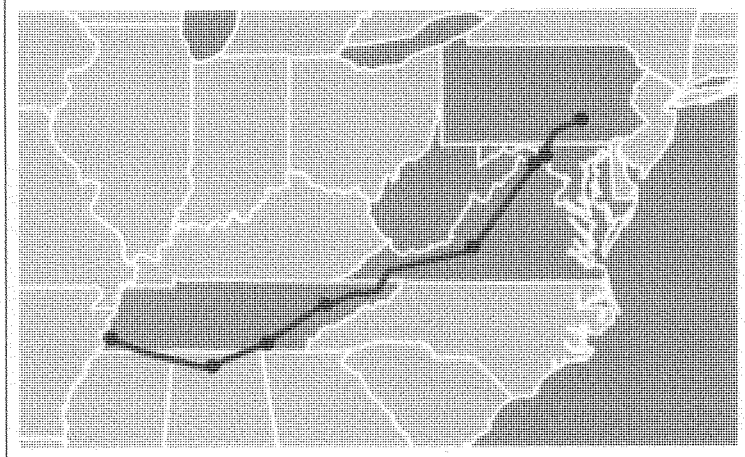



[1] RAIL Solution is a 501(c)(3) non-profit organization that has developed the Steel Interstate System concept. (www.steelinterstate.org)

allowing higher speeds and improved energy efficiency.
- *Improved rail alignment* and other modern engineering features.
- *Regional intermodal terminals* at periodic intervals to increase access of smaller truck and shorter distance operators to the benefits of the system.

Benefits would be a 50% reduction in the liquid fuels consumed by the SIS compared to transportation of the same freight volume by trucks, representing a 6% decline in total national oil consumption, with proportional reduction of pollution and green house gases. Fatalities for the 40,000 miles will decrease by 30% because of grade separation and reduction of truck traffic volume. The cost to American taxpayers and businesses will be as much as 60% less by providing increased rail capacity rather than increased highway capacity for trucks. Other benefits would include improved national defense security, energy security, and balance of payments, as well as increased productivity

A specific proposal for a demonstration project of an SIS system, called the Valley Corridor project, would modernize an under-utilized rail line between Memphis, TN and Harrisburg, PA, built in the 1800s. This Steel Interstate prototype would yield significant social and economic benefits by reducing freight truck traffic along the route (e.g., Huntsville, Chattanooga, Knoxville, Bristol, Roanoke and Hagerstown) and by offering the option of passenger rail for the first time since 1968 to most of the region. Trucks per day carried by the Valley Corridor SIS demonstration would increase from 4000 in 2023 to more than 8000 in 2035.



**Valley Steel Interstate System Prototype Demonstration**

## 1. INTRODUCTION

The freight rail system of the United States is in need of a broad range of improvements to bring it up to standards that will allow the system to contribute significantly to meeting the transportation needs of the future. RAIL Solution proposes that the U.S Government lead a set of policies and enact legislation as required to enable a public-private effort to modernize the American freight rail system, creating the Steel Interstate System.

The American freight rail system is mostly privately owned. We do not advocate any change of ownership. We are recommending that significant incentives be given to encourage the accelerated improvement of the freight rail system to enable it to offer very competitive services for all classes of freight, especially to enable rail to realize the new market potential for intermodal and passenger service. Failure to attract additional capital to greatly increase the bare bones construction capital that U.S. railroad companies are capable of generating will result in erosion of freight market share from the rail mode, placing far higher and untenable burdens in the long run upon taxpayers, businesses, highway users, and the entire national economy. The Steel Interstate will be developed using a combination of sustainable technologies that do not require major innovations or scientific breakthroughs - just the willingness to make the investment and use American engineering and labor to get it done.

## 2. OUR REQUESTS OF THE PANEL ON 21ST CENTURY FREIGHT TRANSPORTATION

We respectfully request the Panel on the 21st Century Freight Transportation to analyze and develop recommended policy and legislation on the following very important issues:

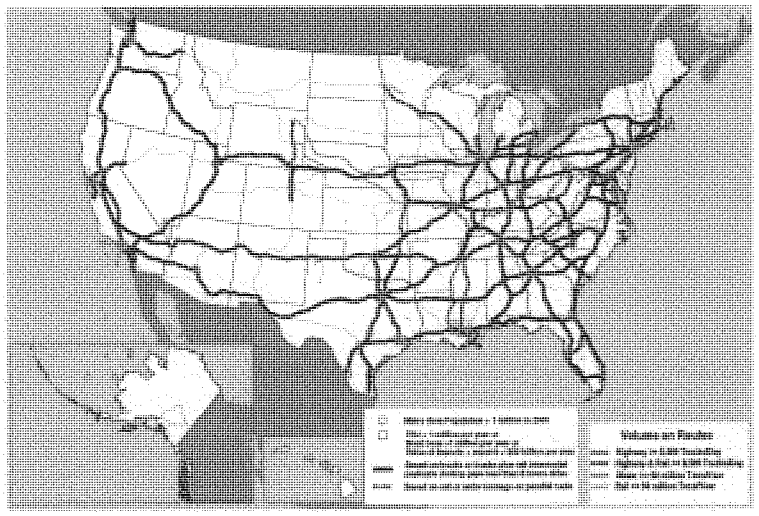
1. Adopt a policy and strategy for assisting and accelerating the modernization of American railroads along the lines of the Steel Interstate concept outlined in this testimony.
2. Designate corridors of national significance because of the volume of freight traffic and the probable cost of accommodating growth of freight volume in those corridors.
3. Determine the relative cost, both total and to the taxpayer and transportation user, of using different modes of transportation for meeting future freight transportation needs. (For example, use a Steel Interstate prototype system in a multimodal corridor to determine the life cycle costs of interstate highway truck lanes vs. rail multi-tracking and alignment improvement to accommodate future freight?)
4. Determine criteria for funding projects of regional and national significance, and a process for funding them.
5. Examine what barriers exist preventing full utilization of various means of freight transportation and recommend actions to remove them. (Barriers, such as inadequate regional planning between states, unequal tax treatment, and unequal modal subsidies need to be examined.)
6. Adopt a long term financing strategy for both public and private investments in infrastructure needs, including changes in tax law to incentivize private investment and measures for additional revenue.
7. Develop integrated maps of all modes of freight transportation as these exist today in the U.S., and project what the maps should look like in the future, taking into account desired changes in the mode of transportation of the future freight network.

When the panel is wrapping up its work and report, we would appreciate receiving an assessment of the response that has been given to the points above.

### 3. STEEL INTERSTATE CONCEPT

The Steel Interstate[2] should be developed by the railroad companies undertaking phased improvement of the existing freight railroad infrastructure, starting with the location of best opportunity for improved efficiency and increased market potential for transportation services. The Steel Interstate System would utilize mostly existing rail lines that parallel existing interstate roadways, mostly choosing those paired road and rail systems that already have heavy freight traffic. The system would consist of approximately 40,000 route miles of railroad, containing a multiple-tracked high capacity system. See Figure 1 for the flow of truck and intermodal rail freight in the U.S. in 2008[3]. (Average daily intermodal service is the annual tonnage moved by container-on-flatcar and trailer-on-flatcar service divided by 365 days per year and 16 tons per average truck payload.) The rail intermodal service is service on rail lines parallel to highway interstate routes. The system would, of course, need to be derived from analysis of the actual freight volumes anticipated in the future.

Major Freight Corridors



Note: Highway & Rail is additional highway mileage with daily truck payload equivalents based on annual average daily truck traffic plus average daily intermodal service on parallel railroads. Average daily intermodal service is the annual tonnage moved by container-on-flatcar and trailer-on-flatcar service divided by 365 days per year and 16 tons per average truck payload.
Source: U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, 2008.

**Figure 1. Major freight corridors including both truck and rail**

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[2] The Steel Interstate System concept is described on this website: http://steelinterstate.org
[3] U.S. Department of Transportation, Federal Highway Administration, Office of Freight Management and Operations, 2008.

The Steel Interstate System (SIS) concept is a core national network of high capacity, grade separated, electrified railroad mainlines. The system would realize for railroads what the Eisenhower Interstate Highway System achieved for roads, and would become the backbone for movement of both goods and people in the 21st Century. Many more trains of all kinds would be accommodated, and these could move much faster, providing truck-competitive speeds for movement of freight, and auto-competitive speeds for movement of passengers. This section describes what such a rail system would look like, how the SIS would transport all kinds of goods as well as people, and how the concept fits into the evolution of rail transportation in America.

The many benefits of the SIS include benefits in such areas as energy conservation, national security, health and safety, pollution reduction, greenhouse gas emission abatement, economic competitiveness, energy independence, infrastructure investment, and preparing the nation to cope with diminishing oil reserves in the future.

### 3.1. Description of the SIS

The SIS would be high capacity, electrified, and grade separated, resulting in speed, reliability, and safe operation. These design features are depicted in Figure 2.

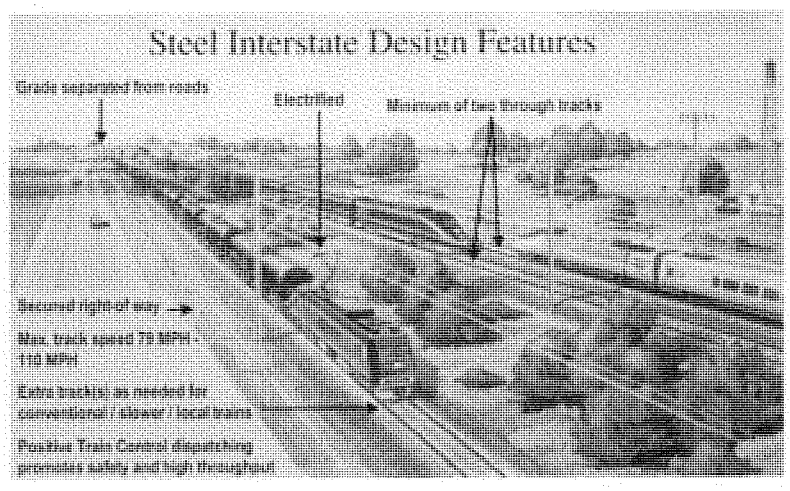
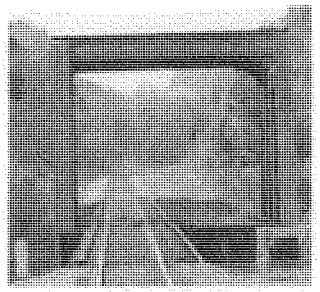



**Figure 2. Steel Interstate Design Features**

#### 3.1.1. High Capacity.

The SIS would be high-capacity, meaning that these main lines would have at least two through tracks, so that trains can be handled in both directions without having to stop to meet oncoming trains. Because the nation's rail system has stagnated and declined over the five decades that the Interstate Highway System has been built out, many places where rail lines once featured multiple tracks today have only one,

although the rights-of-way, in many cases remain, such as the one depicted near Knoxville, TN in Figure 3.



Norfolk Southern RR, former 2-track bridge over Holston River, Strawberry Plains, TN

**Figure 3. Two track bridge on the Norfolk Southern north of Knoxville, TN**

Modern signaling systems permit trains to operate in both directions on a single track with periodic passing sidings, but this drastically reduces capacity and fluidity of movement because trains inevitably have to stop and wait at the sidings for oncoming trains to pass. The Steel Interstate will require the capacity and speed afforded by multiple tracks. In some places a second track can be added rather easily on rights-of-way that once had two or more tracks. In other places the added track capacity will be more difficult to install, requiring new grading, bridges, and relocation of equipment.

A view of what the multi-tracked system might look like in Virginia's Shenandoah Valley is shown in Figure 4.

**3.1.2. Electrified System.**

Electrified means that the SIS network will be powered by electricity, provided to electric locomotives from a system of overhead wires called catenaries. A spring-tensioned device on top of the locomotive, called a pantograph, presses against the catenary wire making a solid contact for the electric current to flow. Today in North America, only Amtrak's Northeast Corridor passenger operation uses such an electrified system. Trains in the rest of the country are powered by diesel locomotives, where fuel is burned on board to generate electricity to power the locomotive's traction motors. Electrified rail operations are not technically new or complex. Railroads throughout much of the world are powered this way today. Many rail systems in the U.S. were electrified up until the middle of the last century. Electric operation is a key part of the SIS because of certain efficiencies offered versus diesel-powered trains. But most importantly because domestically generated electric power can be substituted for foreign oil. This produces enormous economic benefits that accrue year after year and can help pay for the Steel Interstate System. Of course the system can be operated with diesel power while phasing in electrical motive power.

**Figure 4. Pictorial representation of Steel Interstate System in Virginia Countryside**

**3.1.3. Grade Separation.**

Grade-separated means that rail lines of the Steel Interstate will not cross roads and highways at grade, but will pass over or under using bridges or underpasses. This is analogous to the design advancement brought about in Interstate Highways. Rail operations will be substantially expedited by having all major grade crossings eliminated. Increased train frequencies and speeds will not adversely affect the driving public, and safety will be greatly improved by removing a major cause of vehicle/train collisions. Figure 5 shows a railroad trench used for grade crossings for roadways and also for noise abatement.

**Figure 5. Railway trench to avoid grade crossings by vehicles**

**3.1.4. Alignment of the Steel Interstate.**

Core network means that there will be a backbone of SIS-caliber railroad main lines, just as there is today a backbone structure of Interstate Highways. In both cases the core network of main routes supports and feeds traffic to and from a larger network of secondary routes. The rail system alignment would need to be improved to allow the speeds and capacity necessary; that is, curves restricting speed would need to be eliminated, and super-elevation of alignments changed to accommodate higher speeds. In addition, because of the volume of rail traffic in many towns and cities, where the old routes run parallel to the main street, rerouting on new rights-of-way may be required, just as interstate highways often bypass urban centers.

To illustrate what would need to be done, the pictures of Figures 6 and 7 show the before and after alignment.

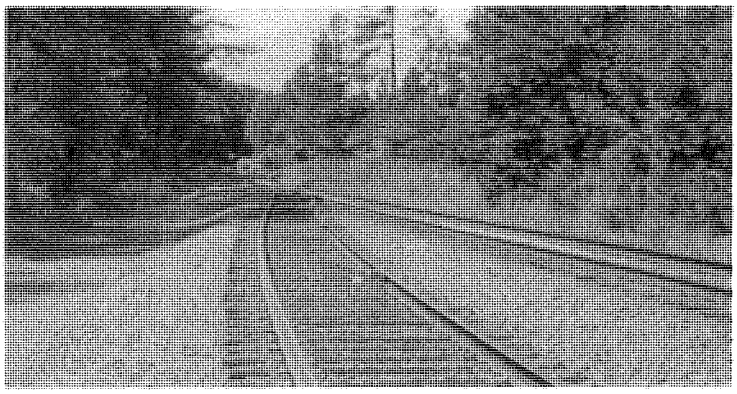


**Figure 6. Single track alignment with passing sidings before double tracking.**

**Figure 7. Alignment after double tracking and changing curvature**

**3.1.5. Speed of the SIS.**

The Steel Interstate System would be designed to be capable of point-to-point average speeds of

- Freight 60 mph
- Intermodal 70 mph
- Passenger 90 mph - passenger service for high travel density
- Passenger top speed - ~115 mph

Speed is greatly improved because there is room on the SIS for through trains in both directions to run without having to stop for trains traveling in the opposite direction. Extra tracks would be constructed where needed for faster trains to pass slower ones, or to permit separate passenger train operations. Furthermore, trains can move on the core network over long distances, avoiding the congestion of yards and terminals. Trains would exit from the SIS network, just as we exit from the Interstate Highways today, to interface with local rail operations such as yards, terminals, and local industrial switching.

The SIS is not a "high speed" rail system for passenger trains; rather it is a vastly upgraded network of key rail corridors that can serve both freight and passenger trains on shared infrastructure, operating in a range of speeds up to 115 mph on shared right-of-way, with a typical low speed target of 60 mph. The Steel Interstate range of speeds is sometimes called "high*er* speed" rail, high performance rail, or highway competitive rail. (The term High Speed Rail (HSR) describes passenger trains operating on HSR-dedicated tracks at speeds of 125 mph and above. The SIS is distinguished from HSR by serving as system for both freight and passenger trains.)

**3.1.6. Reliability of the SIS.**

Reliability is very important to rail operations, both passenger and freight. Today, the nation's rail system is characterized by much lower capacity compared to recent decades, and rapidly rising traffic This combination preordains congestion, and congestion kills system reliability. The Steel Interstate will provide adequate capacity so that all trains, both passenger and freight, can move fluidly over the network without getting in each other's way or having to stop and wait. This will enable freight to be more truck competitive and move much better on just-in-time schedules that shippers want. Passenger trains will be able to maintain published schedules and not be delayed frequently by freight trains blocking the lines.

**3.1.7. Capacity of the SIS.**

Capacity of the key SIS corridors would be much greater than today's existing lines, primarily due to the use of multiple tracks. Trains of all kinds could be accommodated – conventional freight, unit trains, double-stack container trains, open-intermodal trains such as rolling highway (truck ferry), mail and express, perishable cargoes, and passenger trains. Railroads would not have to turn away business desiring to shift to rail because of highway congestion, driver shortages, or skyrocketing fuel costs. This is an important benefit to the nation, because from an energy security, an economic productivity, a health and safety, or an environmental standpoint, it should be national policy to maximize freight movement by rail. The

SIS makes this possible. Rail traffic will have room to grow again. And every ton or passenger switched from the highway to electrified rail will lessen our chronic dependence on oil to power the transportation sector of our economy.

In a study of capacity Cambridge Systematics analyzed the maximum capacity of multi-tracked systems[4]. Their conclusions follow:

**Table 1. Capacity of systems with computerized train control**

| Capacity of System with CTC | trains/day |
|---|---|
| 2 track multi-type trains | 75 |
| 3 track multi-type trains | 133 |
| Average Trains per day on system | 104 |

### 3.1.8. Open intermodal features.

Open intermodal system design should be considered as an option so that regional, smaller terminals can make intermodal rail more accessible and increase significantly freight that can be diverted to rail. If a large number of trains were leaving major end terminals, which will be the case in high density freight corridors, some could be made up to allow stops at intermediate locations. For example, shipments in containers of goods from China destined for a distribution center 400 miles distant could be assembled into a regional train that would be stopping to unload at small intermodal terminals located at approximate 200 mile intervals along its route, which in total might be 1000 miles or more in length. The attractiveness of this system is that small trucking operators, even those operating a single truck, can easily use such a system, thus providing small operators and businesses entry into the intermodal market while still maintaining control over their loads.

There are several open modal systems that can be used. All of them feature small footprints for the terminals, load without requiring cranes, and some allow the tractor to go with the trailer. The Modalohr system used in Europe (Figure 8), or similar system, works for quick loading without cranes. While the Modalohr has the down side of having to carry an articulated platform, it has the advantage of being able to accommodate multiple loading and unloading all at the same time. This is just an example of a new type of system that should be considered.

Many other intermodal services have been and are being offered through open modal systems, including RoadRailer and roll-on-roll-off or rolling highway, which do not require lifting cranes and accommodate the whole tractor-trailer rig. Historically and even now, the trailer on flat car (TOFC) concept is being used, but this requires a crane for loading the trailer, thereby making loading a significant number of train cars time-consuming.

[4] 1- Table 6-1, National Rail Freight Infrastructure Capacity and Investment Study, Cambridge Systematics, Sept. 07

## Modalohr system works for quick loading without cranes.

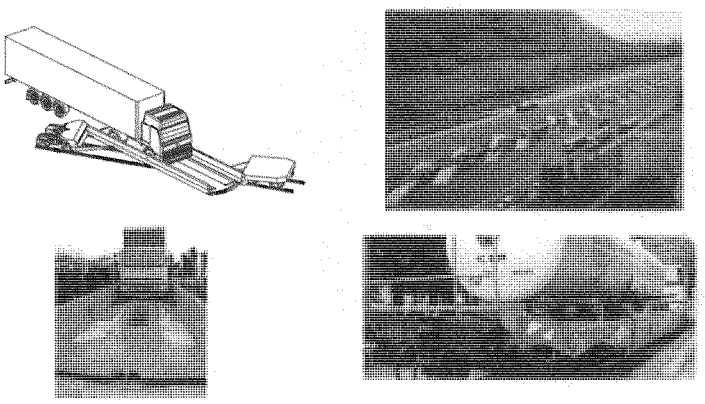


**Figure 8. Modalohr System used in Europe is an example of a quick loading open modal system**

### 3.1.9. Rationale for the SIS.

Why do we need a national rail system for the Twenty-first Century with more speed, reliability, and capacity?

The railroad industry's capacity had been in steady decline, but capacity has increased in recent years because of selected track and signal improvements and increased capacity of railroad car and engines. Historically, however, the interstate highway network diverted large amounts of freight, especially time-sensitive and high-value products, away from the railroads and onto the highway. That method of transport is more expensive because of the capital and maintenance costs of roads relative to rail and because of the higher truck operational costs compared to rail over intermediate to long haul distances. Because of the competition from and public financing of the interstate highways, railroads have responded by abandoning many miles of light density lines, taking up double-track on many routes, removing sidings, scrapping freight cars, and otherwise making difficult downward capacity adjustments. In addition to declining business, the steady impact of paying property taxes on every mile of track and piece of rolling stock and equipment provided a further catalyst to downsize wherever possible. These events have created a system that is far from optimized to provide modern, high speed, reliable fast rail service. The SIS concept reverses these trends.

### 3.1.10. State of the Technology for the Steel Interstate System

The Steel Interstate System is not an invention. It is a description of how transportation policies can be crafted to take advantage of existing rail technologies—specifically along corridors of national significance. This rail technology is in place and being used elsewhere in the world. It should be in place and used here. One of the first to suggest the steel interstate idea was Gil Carmichael, who at the time was head of the Federal Railroad Administration. In 2011, he said that "Interstate 2.0, a rail-based North American transportation network, represents the new transportation paradigm for the 21st century"[5].

Technologically, rail is capable of economically moving the world's citizens and essential goods without oil, using renewable energy sources.

Electrified streetcars, light rail, subways; and commuter, intercity and high speed rail trains can transport us:

- Around city centers
- Between neighborhoods
- Across metropolitan areas
- From bedroom communities to regional work centers
- From small towns to cities
- Between midsize cities
- Across and between mega-regions
- To long-distance flights

Electrified rail can also transport *our goods*:

- In bulk shipments on unit trains
- From domestic manufacturers to urban markets via high volume merchandise carload trains
  - From seaports to regional distribution centers on double-stack "land barge" intermodal trains
  - In long distance domestic-market lanes on double/single-stack intermodal trains
  - Between mid-range domestic markets on higher-speed, open-technology (iterations of "piggyback") intermodal trains
  - At the head end of conventional intercity and true high speed passenger trains, in airline cargo containers or other modern equivalents of Railway Express and Railway Post Office.

The Steel Interstate System is the common thread that weaves these rail services into a seamless, multi-modal, transcontinental transportation system. It would consist of a core network of high-capacity, electrified, grade separated railroad lines capable of providing all of the services above except high speed trains.

### 3.2. Railroads build the infrastructure

The new infrastructure would be built by the railroad companies using present system infrastructure for the major part of the eventual national route system. It will be necessary to obtain new rights-of-way in locations where existing ROW is not wide

[5] http://www.inboundlogistics.com/cms/article/embracing-interstate-2-0-a-rail-based-transportation-vision/

enough or does not have adequate configuration, where the system needs to be rerouted, such as away from the center of towns in many cases, or to shorten routes substantially. In some cases, inadequate bridges and tunnels restrict traffic. Some main line rail routes cross each other at grade level. These parts of the infrastructure need significant work. Figure 9 depicts the manner in which bridges restrict speed and therefore, capacity of the system.

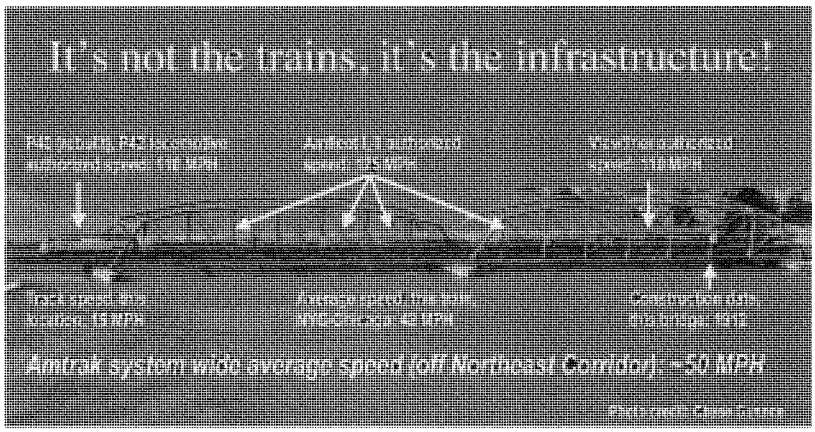



**Figure 9. Such speed reduction infrastructure as depicted by this bridge would need to be replaced.**

### 3.3. Service provisions of the Steel Interstate System

To summarize the service provisions, the ideal Steel Interstate System provides high capacity for all classes of traffic except High Speed Rail (greater than 125 mph which must be built on systems dedicated to passenger rail). The system would maintain the ability to transport bulk freight - only faster - and would offer very competitive speed and reliability for intermodal freight and passenger rail.

Examples of these trains are bulk freight (coal train) in Figure 10, intermodal freight in Figure 11, and passenger service in Figure 12.

**Figure 10. BNSF Coal Train - Steel Interstate design speed- 60 mph (Photo courtesy of Doug Wertman)**

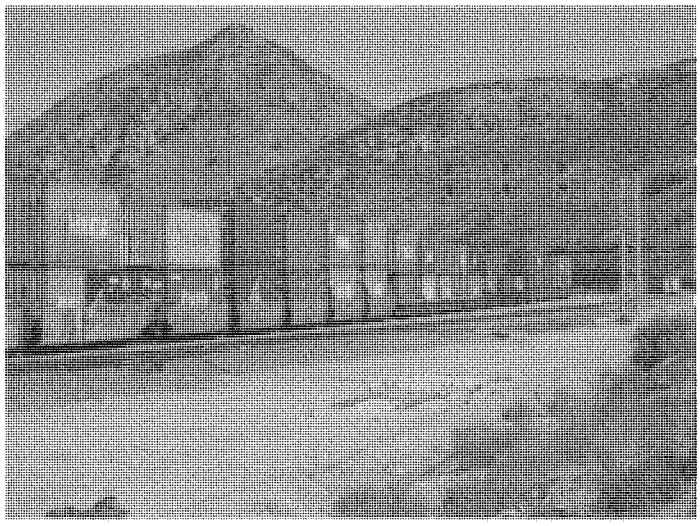


**Figure 11. Intermodal Freight Train - Steel Interstate design speed point-to-point - 70 mph (Photo courtesy of Doug Wertman)**

**Figure 12. Passenger Train- Steel Interstate design speed- 90 mph point-to-point (Photo courtesy of Peter Vanden Bossche)**

### 3.4. Steel Interstate System should parallel key highway routes

To facilitate the optimum use of the U.S. highway and the railroad systems, the railroad must be brought up to Steel Interstate standards along high density rail lines that parallel similarly dense Interstate highway corridors, so that the two become a paired corridor. Examples of this are: 1) the Norfolk Southern paralleling I-75, I-40, and I-81 between the Mid-south region and the Northeast, 2) the CSX from Florida to Chicago paralleling I-75, I-24, and I-65, 3) the CSX paralleling I-95 from Florida to the Northeast, 4) several railroad lines (Union Pacific, CSX, and Ohio Central) in series which taken together parallel I-70 from Denver to Pennsylvania and Maryland, and 5) I-40 and BNSF from Los Angeles to Memphis.

### 3.5. Phased implementation

The Steel Interstate System would be phased in over a period of 30 years to obtain the complete 40,000 mile system. The phasing would give priority to high density freight corridors. (See Figures 13 and 14 for graphic depiction of truck freight volume in 2002 and 2035. In addition to phasing the upgrading of track infrastructure, various features can also be phased, such as electrification of high density corridor to replace diesel (or gas) and passenger service, both of which are capital intensive.

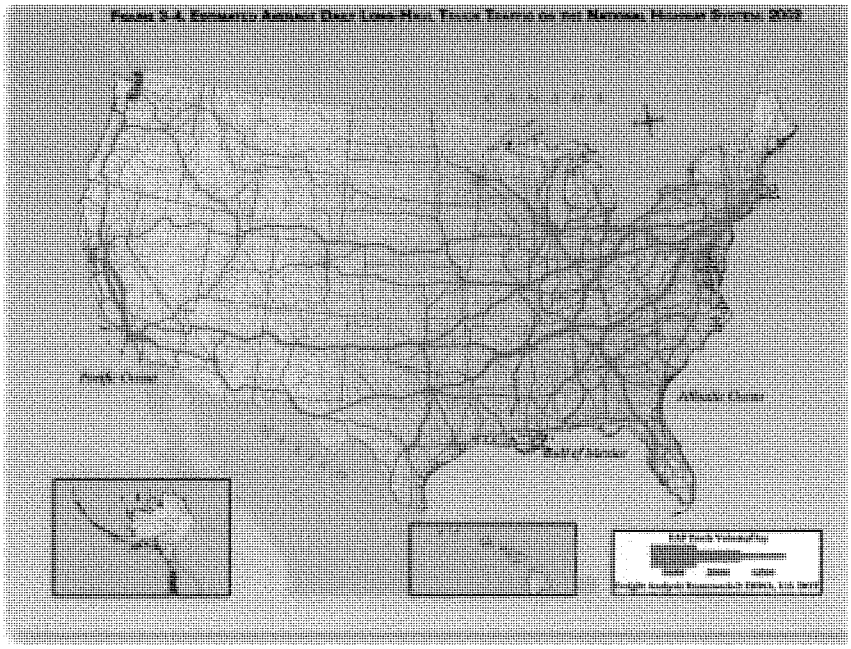


**Figure 13. Average daily long haul truck traffic in 2002. (FHWA)**

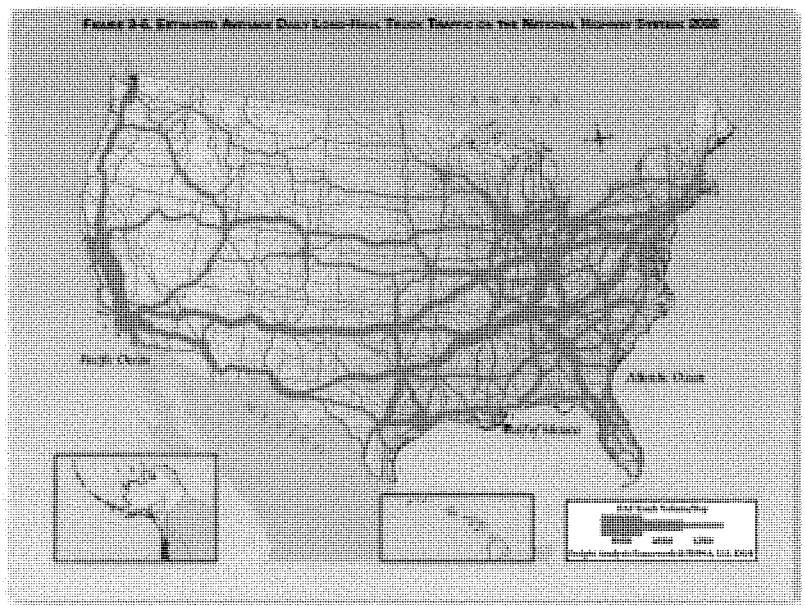
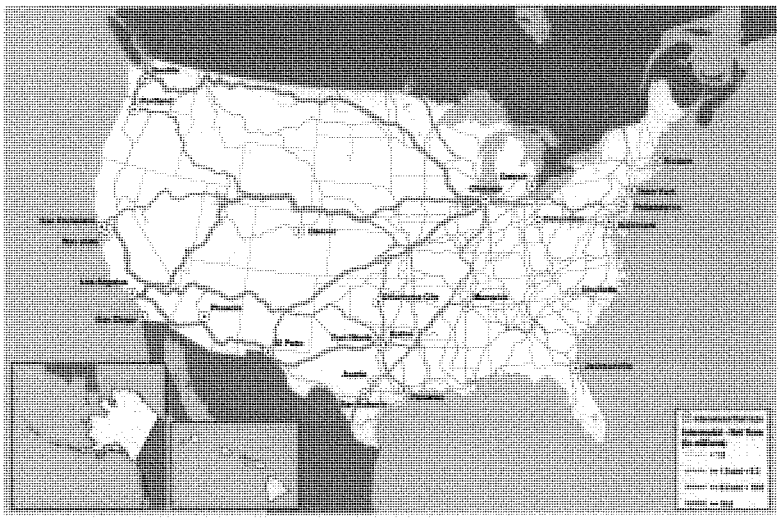


**Figure 14. Average daily long haul truck traffic in 2035. (FHWA)**

The task of deciding where the emphasis should be placed in phasing improvements requires an assessment of the present state of the rail system and comparing it with the truck freight statistics.

The map of the Federal Railroad Administration for tons of intermodal freight (Figure 15) shows that intermodal rail east of the Mississippi River is not such a large amount[6]. This is thought to be due to short hauls, but that is not necessarily the case. Much of the lack of competition by rail is because it is not competitive in terms of capacity, reliability, and speed. Much of the eastern systems were laid out in the 1800s, when the excavation was done by animal and manual labor. For rail to be competitive and compete in intermodal transportation, the system must be improved. Priority will need to be given to the eastern systems, where heavy dependence is now on highways.

Tonnage of Trailer-on-Flatcar and Container-on-Flatcar Rail Intermodal Moves: 2010



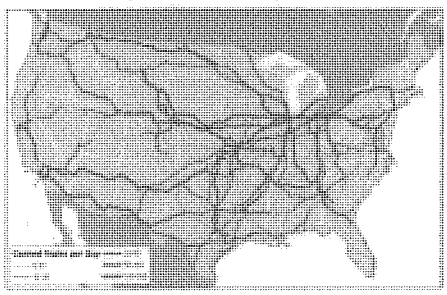
Source: U.S. Department of Transportation, Federal Railroad Administration, special tabulation, September 2012.

**Figure 15. Tonnage of intermodal rail moves in 2010**

Some Projections for freight rail volume are given in Figures 16, 17, and 18.

# AAR Study does not show rail from Knoxville to Roanoke and up the Shenandoah Valley

**Figure 4.3 Current Corridor Volumes by Primary Rail Freight Corridor**
*2005 Freight Trains and 2007 Passenger Trains per Day*



Source: Cambridge Systematics, Inc.

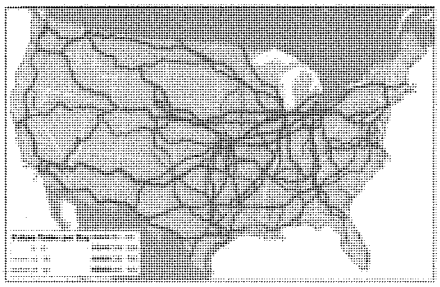
Note: Volumes are for the 85th percentile day.

Reference: National Rail Freight Infrastructure Capacity and Investment Study, AAR by Cambridge Systematics, 2007

**Figure 16. Figure of AAR Study showing low volumes of freight and passenger, prior to the Recession, in the Southeast (between Southwest and Northeast) by rail**

# AAR Study does not show much expansion in the Crescent Corridor by 2035

**Figure 5.1 Future Corridor Volumes by Primary Rail Freight Corridor**
*2035 Freight Trains and 2007 Passenger Trains per Day*



Source: Cambridge Systematics, Inc.
Note: Volumes are for the 85th percentile day

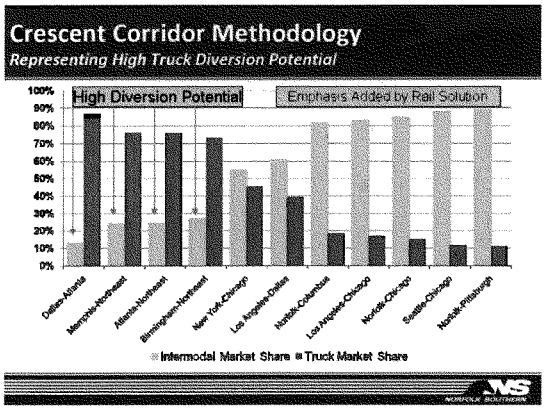
Reference: National Rail Freight Infrastructure Capacity and Investment Study, AAR by Cambridge Systematics, 2007

**Figure 17. Graphic of AAR Study showing low volumes of freight growth on rail in the Southeast by 2035.**

In Figure 18, Norfolk Southern compiled figures to show freight-hauling market share between various city pairs. The comparison shows that in corridors between southeastern (and southwestern) cities and northeastern city pairs, rail averaged about 20% market share and truck almost 80%, while in the New York City-Chicago corridor rail market share is over 50%. In the Norfolk-Chicago or Los Angeles-Chicago corridors rail market share exceeds 80%. Much of this successful rail volume is containerized international port traffic. That rail infrastructure and its interface with port cargo handling facilities had to be upgraded to support that intermodal success story. Similar upgrades are vital to the success of domestic rail intermodal.

Figure 18 reinforces the fact that the penetration by rail intermodal service between the southeastern U.S and the Northeast is weak. Clearly, some areas have good competition, but others not so much. When examined in detail, what the data show are trucks occupying routes that have adequate, direct interstate highways vastly out-compete parallel archaic, slow rail corridors. For example, there is almost no predicted future traffic on the rail lines paralleling I-95 in the Southeast. Why is this? This type of data needs much more detailed examination to determine where incentives should be developed for more and better rail service. Compilations based on simple extrapolation of present truck and rail patterns, which is often practiced in studies, are not adequate analyses on which to base policy for future decades.

**This graph of Norfolk Southern shows higher use of rail for intermodal freight outside SE to NE corridor*.**




*Graph from Norfolk Southern-overlay for emphasis by RAIL Solution

**Figure 18. Intermodal and truck proportions of packaged freight.**

## 4. BENEFITS

Modernizing the U.S. freight railroad system to meet the standard of the Steel Interstate System will provide many benefits to American life. The Steel Interstate System will bring with it significant benefits to the economy, to the environment, to the health of the American people, and to national security. The SIS will provide the infrastructure for the addition of passenger rail throughout the country. The improvements will reduce the overall cost to transport goods and people, will reduce the cost of transportation infrastructure, and will reduce the amount of taxes that must be raised to accommodate growth of transportation requirements.

### 4.1. Cost of Transportation

The cost of transportation would be reduced by the implementation of the Steel Interstate System. Primarily this would be due to the avoided capital costs for additional highway lanes and replacement of worn out lanes and maintenance costs required to accommodate increased truck volume. The addition of truck climbing lanes and lanes to reduce congestion are very expensive. In addition, much of the rail infrastructure is financed and maintained by the railroad companies, thus reducing taxes that would be paid by the American people.

The construction cost from improving 40,000 miles of interstate roads to standards that meet those of truck thruways, such as the one proposed by Star Solutions for Virginia, would be on the order of $2 trillion. Assuming that such capital costs are not needed in more than half of the U.S., the cost would be about $1 trillion (2013 dollars). The cost for engineering and constructing the national Steel Interstate System, not including rolling stock and engines, may be in the range of $500 billion. Even assuming that the $500 billion estimate is low, and that construction cost for the Steel Interstate will be $1 Trillion, still the cost to the American tax payers will be less than $150 billion, because 85% of the capital cost comes from private sources. Thus, the capital cost for accommodating future freight load is probably much less with rail; significant cost is borne by private companies; and high capital costs and additional maintenance cost is avoided by the public.

The diversion of trucks to rail will enable the avoidance of additional costs for maintenance of the roads. A study done for the Commonwealth of Virginia showed that in Virginia, heavy trucks on I-81 are being subsidized by the public at a rate of by $.086 per mile for maintenance alone.[7] Based on traffic volumes, additional truck-induced maintenance cost, not paid by trucking, in Virginia on I-81 would be approximately $50 million annually. At projected 2035 truck traffic volumes and assuming no rail improvements, the subsidy to the trucking industry for maintenance on I-81 in Virginia increases to $70 million annually. For national trucking, the maintenance costs, not paid by the trucking industry, will be a much larger figure, perhaps on the order of $5 billion annually. Depreciation costs for truck contribution to total replacement of worn-out highway infrastructure are additional to this cost.

For medium to higher density rail passenger routes less than 500 miles, passenger rail should be cheaper than automobile travel or plane.

### 4.2. Economic Benefits and Impact

Economic benefits accrue to the railroads, the trucking industry, the logistics industry, the users of transportation (all businesses and people), and the economy in general.

#### 4.2.1. Railroads

The railroads are limited in business sectors that assure growth. Some sectors may decrease, such as coal volume. Where growth in rail business volume can be increased is in intermodal transportation of consumer goods and packaged freight and in passenger rail. However, to realize the potential, the railroads much become more competitive in speed, reliability, and overall performance, including cost. For example, Norfolk Southern has the potential for up to 30 intermodal trains per day on the western part of their Crescent Corridor (paralleling I-40, I-75, and I-81), if the company can get 60% or more of the longer distance trucks diverted to their system. This number would grow to 60 by 2035. Right now, in 2013, the NS is operating one intermodal train each way on this same section of their Crescent

[7] When environmental and health and safety costs were included, Virginians are subsidizing every truck on I-81 at the whopping rate of more than $.33 per truck mile traveled. All figures in 2010 dollars. "The Virginia Statewide Multimodal Freight Study," Cambridge Systematics, Final Report 2010, Page 34 Table 1.6, Selected Monetized Transportation Benefits.

Corridor. These larger numbers cannot be attained now because the Crescent Corridor is slow and capacity limited--- in need of reconstruction to Steel Interstate standards.

With the Steel Interstate System, passenger rail can be offered for operation on a system that is fast, reliable, safe, and comfortable. The speeds of passenger trains will be fast enough to be very desirable for short to intermediate distances. The Steel Interstate will make passenger rail a reasonable alternative for most small to large cites throughout the United States. The fact that trains can be operated profitably and provide revenue for freight railways has been proven recently in Virginia with the success of trains operated by Virginia Rail under contract with Norfolk Southern and Amtrak. The Steel Interstate will provide an alternative to short flights, such as from Knoxville to Atlanta, or to driving round trip. Wick Moorman, President of Norfolk Southern, says that, if you want passenger rail, cover the operating costs, the liabilities, and the extra capital[8]. We would add also a reasonable profit.

**4.2.2. Trucking industry**

The trucking industry will be enhanced with the Steel Interstate System. The rail system will never replace the use of trucks for short distance and for delivery to and from the doors of businesses and homes. What it will do is change the mode of operation for the drivers. Most long distance moves of trailers, trucks, or containers would be by rail to local intermodal terminals. The drivers for trucks to and from these terminals would be able to complete their round trips in a day or much less. This would help the trucking industry for lowering transport cost and making driving profession more attractive, addressing the national driver turn-over rate and shortage. However, the Steel Interstate System must be implemented in such a way to assure that it is as fast as highways, as reliable in terms of on-time delivery, and is not obstructed by interface problems between rail lines and roadways.

**4.2.3. Logistics industry**

The logistics industry is now coping with a very complicated network of roads and rail lines with widely varying efficiencies and performance. The Steel Interstate will help bring order and higher level capacity and performance to the freight transportation network, reducing inventories and supporting just-in-time delivery goals.

**4.2.4. Transportation users**

Users of transportation services will see better service overall from various elements of the system. Because of enhanced efficiency, transportation costs would be less than they would be without implementation of the SIS. Elderly and disabled citizens and mid-distance business travelers will especially benefit from an extended, affordable passenger rail service alternative to auto and air travel.

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[8] Paraphrase of public comments of Wick Moorman in a speech to the Joint Rail Conference, Knoxville, TN, April 17, 2013

**4.2.5. The Economy of the United States**

Electrified, the Steel Interstate will be more efficient and will significantly reduce consumption of oil[9]. As oil consumption for moving freight declines, so do national oil import requirements, allowing more money to remain in the U.S. growing our economy and improving our balance of payments. Rail service options will increase transportation productivity, and since transportation is a significant component of every American product, transportation productivity increases will improve productivity across the national economy.

The rail rights of way will also be used to carry electricity by high efficiency technology, connecting regional grids all along the Steel Interstate and transmitting energy generated by remotely sited wind, solar, hydro, and sustainable biomass to market. Where an individual wind turbine or solar panel farm's output is variable, the more arrays that get connected over a larger area, the more reliable/predictable the overall power production becomes. This is how sustainable power technologies can be harnessed to produce a system capable of meeting the base and peak demands we currently have. And, what about high speed, high capacity data networks too? We need more bandwidth and higher speeds, and the Steel Interstate would enable access all over the country.[10]

**4.2.6. Business and regional development**

The SIS should help stimulate business along it routes, rebuilding the economies of older "fly-over" cities and attracting businesses internationally. Why? Any business within a distance of 100 miles or even more of a Steel Interstate rail line will have access to the world through a modern, fast transportation system. Business imperatives such as fulfilling production input materials and components and shipping products will be fast, extremely reliable, and reasonably priced.

Development will be possible around regional terminals located at distances of perhaps 150 to 200 miles apart. This is a different idea from what exists on American railroads today, where terminals may be as much as 500 to 1000 miles or more apart. Businesses will tend to locate as close to comprehensive rail and highway transportation as possible.

**4.2.7. Rural development implications**

The Steel Interstate System will bring excellent rail service to America through reasonably close access to freight terminals and, when provided, close access to passenger rail. For example, in Knoxville, the closest intermodal rail terminal on the Norfolk Southern is in Atlanta or in Birmingham. The closest intercity passenger rail is in Atlanta, Cincinnati, Greenville, SC, Charleston, WV, or Memphis. Access to freight and passenger service by rural Americans depends on the development of small, open access terminals and passenger service where volume is sufficient.

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[9] Alan Drake, "A 10% reduction in America's oil use in 10-12 years", http://www2.energybulletin.net/node/16682

[10] Bruce McFadden Blog, http://www.dailykos.com/story/2012/09/02/1127109/-Sunday-Train-Powering-the-Steel-Interstate

To illustrate this point, Figure 19 shows an overlay of the part of the Crescent Corridor of the Norfolk Southern over the legislated service area of the Appalachian Regional Commission. The Valley Route parallels the backbone I-40, the I-75, and I-81 highways, all of which have important feeder Interstate highways, such as I-59, I-26, and I-77. With terminals properly located, most of this region could be served by both intermodal and passenger rail from this part of the Crescent Corridor (the Valley Route).

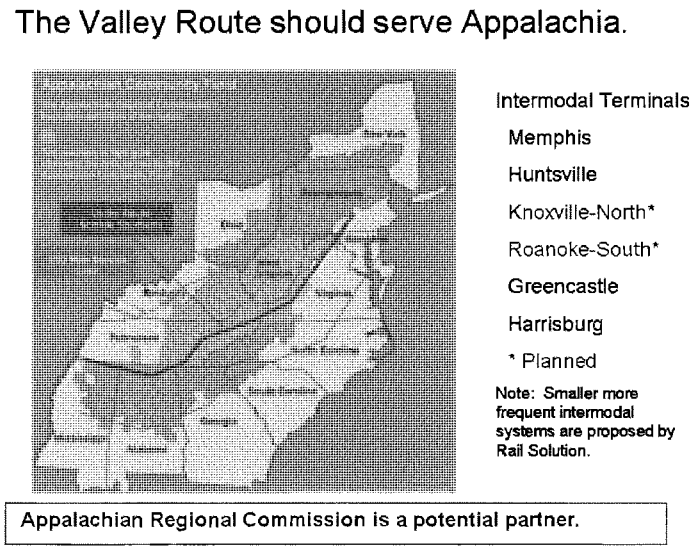


**Figure 19. Appalachian service region for the Valley Route of the Norfolk Southern Railroad**

### 4.3. Social Benefits

Social benefits of the Steel Interstate System included increased transportation safety, improved heath, more transportation choices, and less crowded highways.

#### 4.3.1. Safety

Improved safety comes from several features and effects of the SIS. With fewer grade crossings, there will be fewer deaths and injuries and less damage from crossing accidents. With reduced truck volume on the highways, there will be fewer deaths and injuries and less costs from auto-truck collisions. With SIS rail service there will be no economic benefit to increasing the size and weight of interstate trucks which would consequently increase the number and severity of truck

accidents. With the use of passenger rail, there will be a reduction in passenger deaths (0.8 deaths per 100 million passenger-miles vs. 0.03 for rail). Statistics on U.S transportation fatalities are given on the Steel Interstate website[11]

#### 4.3.2. Health

Health of the American people will be improved, especially in areas already challenged by emissions from trucks, trains, and fossil-fueled power plants (e.g. Knoxville, TN). Reduced use of diesel for transportation would lower human exposure to smog-inducing nitrous oxide and to particulate emissions responsible for increased asthma attacks and other respiratory problems. Health benefits are covered in detail at the Steel Interstate website[12].

#### 4.3.3. More transportation choice

People and businesses will have more modal transportation choice, especially for passenger and intermodal service. National productivity will be enhanced through increased transportation competition and lower transportation prices.

#### 4.3.4. Less crowded highways

A not so intangible benefit is reduced highway congestion, a huge social benefit. Many recent studies have sought to quantify the cost to the driving public and businesses of time lost due to congestion delays and failing just-in-time reliability.

### 4.4. Environmental

#### 4.4.1. Air (Greenhouse gases)

The Steel Interstate will reduce emission of greenhouse gases by substituting: 1) the higher efficiency of rail over trucks for transportation of freight and 2) the higher efficiency of electric locomotive power in place of diesel power. Rail is approximately 10 times more fuel efficient than heavy trucks in transporting freight over mid-long distances. The efficiency of electric power advantage (approximate 2.75 over diesel) comes from regenerative braking and the higher efficiency of the electrical generation for the electrified system. We calculate that the total effect of the implementation of the Steel Interstate on 40,000 miles is estimated conservatively would be a reduction of approximately 50% of greenhouse gases that would be produced by trucks that would be required to move the same freight. That reduction of the impact of exhaust gases is important is substantiated by statistics from the Tennessee Department of Transportation. See Figure 20.

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[11] Rail vs. Auto and Truck Safety Record, http://steelinterstate.org/topics/rail-vs-truck-and-auto-safety-record

[12] Air Quality and Public Health, http://steelinterstate.org/topics/air-quality-public-health

TDOT

## Tennessee VMT Annual Growth Rates

| Vehicle Type | 1990-2005 | 2005-2025 |
|---|---|---|
| Light-Duty Gasoline Vehicle | 1.97% | 1.99% |
| Light-Duty Gasoline Truck | 4.64% | 1.99% |
| **Heavy-Duty Diesel Vehicle** | **2.95%** | **3.19%** |
| Heavy-Duty Gasoline Vehicle | 0.12% | 1.22% |
| **Total VMT** | **2.80%** | **2.15%** |

**Figure 20. Annual growth rates in Vehicle Miles Traveled (VMT), actual and estimated, by the Tennessee Department of Transportation.**

Vehicle Miles Traveled growth rates of heavy duty diesel vehicles are 50% greater than for all other vehicles. Already many areas of the country (including Knoxville, Chattanooga, Birmingham, the Northeast, and Southern California) exceed the standards for an acceptable atmosphere from the standpoint of particulate matter in the atmosphere, including that from diesel exhaust. See Figure 21.

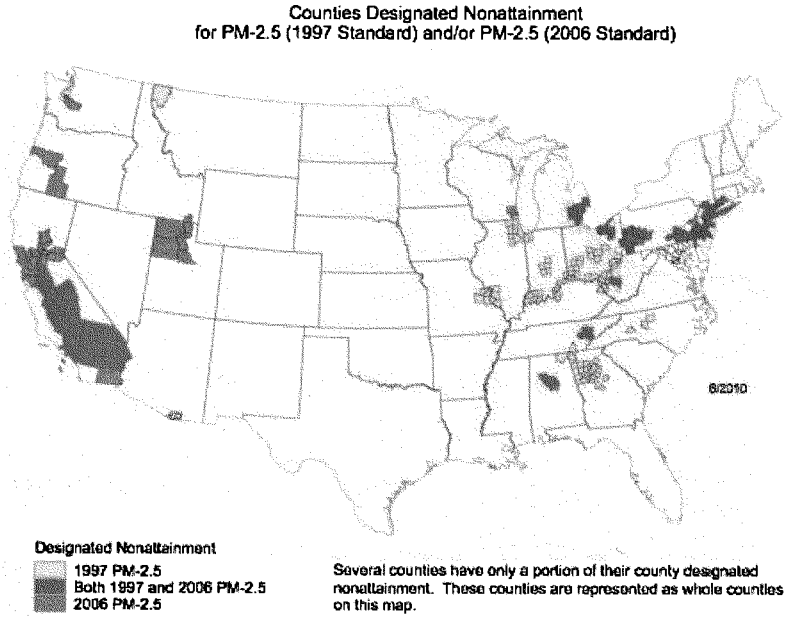


**Figure 21. Counties designated non-attainment for particulate matter (PM-2.5)**

### 4.4.2. Land Impact

The footprint of rail is actually considerably smaller than that of highways, so the impact on use of land is less for rail. Thus, providing for more of the transportation by rail will reduce the impact on land use. In many cases a second or third track can be added to existing railroad rights of way with no new land needed. This contrasts sharply with the voracious requirement for real estate where expanded highways are relied on for new freight capacity.

### 4.4.3. Water

Because trains have a far better safety record hauling toxic substances than trucks, risk to water contamination from crashes and spills drop significantly when those same materials are carried by trains. Further, there is considerable and increasing damage to underground water resources and surface streams, rivers, lakes and oceans. From headline grabbing crude oil spills--Exxon in Prince Edward Sound, BP in the Gulf--to daily mishaps all along the "stream" of production--drilling, transporting, refining, and to the gas pump and oil change, our precious water supply and its living creatures are at risk. Water quality damage can be reduced significantly along this

supply chain by diverting freight and passenger traffic to the electrified Steel Interstate.

### 4.5. Government

Besides all of the other advantages realized in various areas, the Steel Interstate provides some benefits that might be classified as benefits to the government, although the benefits are accrued to Americans, as a people.

#### 4.5.1. National Security

The Steel Interstate System will provide a reliable, modern backbone to serve as a backup for any time that a national emergency calls for increased production and transport of very much larger volumes of material and personnel. The Steel Interstate, makes the U.S. much less dependent on oil in times of national emergency. Transportation could still be carried out by rail with only a portion of the oil required by trucks. Reducing dependence of the transport sector on oil reduces the vulnerability of the economy to petroleum price spikes and production disruptions.

#### 4.5.2. Encouragement of competition

The Steel Interstate System will assure more active competition in the transportation arena. Everybody wins with this solution: the railroads, the trucking industry, the logistics industry, businesses, and the people. The government does its job by providing the encouragement and support for public-private partnerships that will enhance productivity and competition across the economy.

#### 4.5.3. Reduction of government infrastructure

The Steel Interstate System will enable the federal and state governments to reduce the amount of highway infrastructure required and thus enable reduced outlays for transportation capital projects and maintenance. Clearly, encouraging the expansion of private, for profit, tax-paying railroads offers a better return on investment than sinking more public funds into highway infrastructure and maintenance to accommodate freight mobility growth. We believe that life-cycle costs for private rail infrastructure are lower than the public's investment in equivalent highway infrastructure required to satisfy future freight transportation demands. Both the interstate highway system and the railroad system are showing limitations that will have to be fixed. Railroads are still using infrastructure largely built decades – and for some routes, even a century – ago. This needs to be recognized when government policies are considered for having railroads shoulder more of the transportation load of the future, especially intermodal freight and passengers.

## 5. FINANCIAL PLAN

Financing the aggressive improvement called for by the Steel Interstate standards is challenging because it calls for outlays of capital that are considerably beyond what the rail industry currently can muster. In general, some of capital required will need to be financed on a long term basis (25 to 30 years)

**5.1.** Budgetary Estimate for the National System (40,000 miles)

Rail Solution has prepared a budgetary estimate, or an estimate of the order of magnitude of the cost of the total Steel Interstate- 40,000 miles of multi-tracked, grade-separated, higher speed rail (top speed 115 mph). This estimate is based on factors and costs compiled from various literature sources to estimate the cost of a 1000 mile prototype system (the Valley Corridor), which is discussed later in this document.[13] The cost per mile was then applied to the complete 40,000 mile system. The total estimate on for the National system would be $535 billion.

**Table 2. Summary of budgetary estimate for the National Steel Interstate System**

| | $ Billions |
|---|---|
| Rail Trackage | 275 |
| Added Railroad Right of Way | 30 |
| Buildings and Stations | 10 |
| Grade Crossings | 35 |
| Electrification (Optional) | 115 |
| Engineering and Project Management | 70 |
| **Total for National Steel Interstate System** | **$535** |

The outlay for the U.S. railroads was approximately $15 billion for capital expenses. However, much of the capital expenditures were for replacement of equipment and infrastructure. The portion that was allocated to improving capacity and speed would be lower - perhaps one-half of the capital outlay (on the order of $7 to $8 billion). If one chooses a 25-year period for completing the Steel Interstate, the outlay must be on the order of $20 to $40 billion per year. So, the deficit in capital that must be made up is in the range of $13 to $33 billion per year.

### 5.2. Financing

Financing the Steel Interstate System is problematic when the present tax base, practices, and laws apply. Still, the mix of financing instruments that might be used to remedy the financing problem are wide, indeed. Corporate loans, leases, bonds, and equity investment are all of possible use. Government direct subsidy and payment for certain categories of capital expense would seem appropriate. We advise that the government structure the development of the Steel Interstate so the government underwrites the cost of what might be called social benefits- benefits more closely associated with the desires and well being of the public and the business community. Thus, government would pay for elimination of grade crossings at public roads, rights-of-way to relocate rail lines away from urban development and to improve urban street traffic flow, incremental investment devoted to facilitating passenger travel, and for participation in feasibility studies of regional corridors and routes. Private capital underwrites the direct costs of rail rolling stock and infrastructure, such as multiple tracking and alignment changes, bridges, widened rights-of-way, signaling, electrification, and design and engineering costs for those.

[13] RAIL Solution is seeking support for a preliminary engineering study of an SIS prototype in the Valley Corridor. This study will supply firm cost/benefit estimates for implementing SIS infrastructure and technology on the ground across the nation.

We have looked at two cases for financing that represents the extremes of how to finance the improvements required to build the 40,000 mile Steel Interstate. The extremes are: 1) High government support financing, and 2) High private investment for financing. Those are discussed subsequently.

### 5.2.1. Government guaranteed support program alternative

Table 3 shows a split of financing the National Steel Interstate based on a large amount of government support though loan guarantees.

**Table 3. Allocation of Cost to Partnership Entities (Government Guaranteed Financing)**

| | Percent | Total $ Billions | Annual $ Millions |
|---|---|---|---|
| Grants from Federal Government | 1.7 | 9 | 364 |
| Loans guaranteed by Federal Government | 48.6 | 260 | 10,400 |
| State Governments (90 percent from Fed. Gov.) | 8.1 | 43 | 1,733 |
| Local Governments (80 percent from Fed. Gov.) | 2.0 | 11 | 428 |
| Railroad Company Resources | 7.8 | 42 | 1,669 |
| Private Capital (bonds) | 30.1 | 161 | 6,441 |
| Private Capital - direct invest | 1.7 | 9 | 364 |
| **Total for National Steel Interstate System** | **100.0** | **$535** | **$21,400** |

In this financing arrangement, the private capital pays for 88 percent of the Steel Interstate capitalization. The government, mostly the federal government, pays for 12 percent. Legislation would be required, at a minimum, to increase availability of targeted loan guarantees and for Federal grants primarily for feasibility and preliminary engineering analyses.

### 5.2.2. Government Corporate tax incentive program for the Steel Interstate System

The second arrangement is for the preponderance of capital to be raised privately without government guarantees. The allocation of costs are as given in Table 4.

**Table 4. Allocation of Cost to Partnership Entities (Private Financing Incentives)**

| | Percent | Total $ Billions | Annual $ Millions |
|---|---|---|---|
| Grants from Federal Government | 1.7 | 9 | 364 |
| State Governments | 8.1 | 43 | 1,733 |
| Local Governments | 2.0 | 11 | 428 |
| Railroad Company Resources | 7.8 | 42 | 1,669 |
| Private Capital - equity investment | 80.4 | 430 | 17,206 |
| **Total for National Steel Interstate System** | **100.0** | **$535** | **$21,400** |

Government incentives such as those listed below will be required to assist in attracting private capital.

**5.2.3. Reduction of Taxes on Profits repatriated and invested in the Steel Interstate.**

The first suggested initiative is to grant a reduction in taxes on profits of American corporations held overseas when repatriated to the United States, provided that the proceeds of the repatriated profits are invested for the long term in Steel Interstate improvements in the U.S. The estimates for profits held overseas vary wildly, but there is almost certainly $5 trillion that can be repatriated. A part of that sum would provide the financing necessary, and the implementation of the improvements could be accelerated into a 10-15 year program. This idea is discussed fully in this reference by independent researcher Alan Drake.[14]

**5.2.4. Tariff on imports for transportation infrastructure**

The U.S. could impose a tariff on imports if the tariff is used in the economy to decrease the imbalance of in international trade for the U.S. The U.S. is a net importer, so it would qualify under World Trade Organization rules. Increasing the efficiency of the transportation system would make the U.S. more efficient and productive making American goods more competitive in the world market. Also, the implementation of electrification will directly reduce oil import volume, directly improving the U.S. balance of payments. A number of products could be exempted, such as food products, pharmaceuticals, and medical devices. The imbalance in 2012 was over $700 billion.[15] The imports for 2012 less an allowance for the exempted products ($700 million) would be approximately $2 trillion. If an import tax of one percent were applied to this amount, the tax raised would be $20 billion, a number within the range required annually for financing the Steel Interstate System.

This method of financing is also discussed in more detail by Alan Drake.[16] In the case of implementing the tariff on imports, the U.S. Government on behalf of the citizens would take an equity interest in rail companies. Legislation would be required to set up an authority with the power to invest directly in rail companies, or indirectly through underwriting leases for equipment and facilities. This public interest could be sold off to private railroad shareholders over a period of years.

**5.2.5. Tax credits for investment by railroads in speed and capacity increases.**

Another way to incentivize the building of the Steel Interstate System is to enact tax credits to railroad companies and other companies for investing in expansion of rail corridor infrastructure to meet Steel Interstate standards. The railroad companies are already investing back into their systems a very high percentage of their earnings. But, tax credits would increase the level of investment, and companies not even involved in the rail industry would be attracted to invest in Steel Interstate corridors with excellent future potential. Improved corridor facilities would be leased back to the railroads.

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[14] Alan Drake, http://oilfreetransport.blogspot.com/2012/06/building-oil-free-cross-country.html

[15] All foreign trade statistics from U.S. Census Bureau, http://www.census.gov/foreign-trade/index.html

[16] Alan Drake, http://oilfreetransport.blogspot.com/2012/06/that-fellow-behind-tree.html?view=magazine

**5.2.6. Other issues on financing and financial management**

Other issues that are involved with constructing the Steel Interstate that will need to be examined include:
1) Selection of location and division of finances on grade separation projects,
2) State ownership of rail lines where there is not an entity for developing a Steel Interstate route in a corridor that is designated for rail improvements to Steel Interstate standards. For example, there is an inadequate and incomplete line from Nashville to Knoxville, where there is no railroad existing for part of the route. This route parallels I-40 which has a heavy flow of truck traffic, but no close rail line for diversion of trucks from I-40.
3) Eminent domain issues could arise where authority is not clear.
4) Passenger service guarantees regarding capital costs, operating deficits, and liability for operations will need resolution.

## 6. STEEL INTERSTATE DEMONSTRATION- THE VALLEY CORRIDOR BETWEEN HARRISBURG AND MEMPHIS

RAIL Solution has been discussing with various governmental entities and the Norfolk Southern Corporation a proposal to undertake a feasibility study and preliminary engineering analysis of a project for a prototype demonstration of the Steel Interstate concepts. This project would provide both freight and passenger service on the same system at speeds in the 60 to 115 mph range, the exact range depending on the type of traffic, whether general freight, intermodal freight, or passenger traffic. At this point, Norfolk Southern has not endorsed this project. The project, to be known as the Valley Corridor Route Steel Interstate Prototype, would upgrade the western half of the Norfolk Southern Corporation's Crescent Corridor to meet the required standards to operate rail service according to the requirements of the National Rail Plan[17] and the outline of specifications of the Steel Interstate System which has been proposed by RAIL Solution.[18]

The Steel Interstate System addresses most of the elements of the vision of the 2010 National Rail Plan. The specific ways in which it addresses the Rail Plan vision for service to cities, towns, and regions follows:

- Regional Corridors: The SIS network, as conceived by RAIL Solution, connects all sizes of communities across America. The SIS serves both freight and passenger traffic on the same systems at speeds from 60 to 115 mph. Thus, both freight and passenger traffic will be served on a national network connecting all cities because of the fact that rail freight must connect most American towns and cities. The system will interconnect with the high speed passenger rail systems. However, the HSR will be a separate system from the SIS.

- Emerging/Feeder Routes: The SIS network will utilize much of the existing rail system to connect smaller communities and more distant areas, thus providing access of these areas and communities to the larger network.

- Community Connections: The SIS will provide a lower cost option for higher speed passenger rail, for quicker and safer travel from outlying areas to major hubs for air traffic, and compete head-to-head with airlines and automobiles for intermediate distance passengers, traveling distances between cities up to 500 miles.

The SIS Prototype Demo will show the viability and economics of the total system by demonstrating these features in the selected rail corridor, a part of the Norfolk Southern Crescent Corridor.

### 6.1. Valley Corridor Route

The route RAIL Solution has chosen for the demonstration of the Prototype of the SIS is a part of the existing Crescent Corridor of the Norfolk Southern Corporation, which covers the territory from the Southeast to the edge of the Northeastern Mega-region. That route is

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[17] National Rail Plan, September 2010, U.S. Department of Transportation, Federal Railroad Administration. This is the shortest route of the two parallel rail lines of the Crescent Corridor that one can take between the Mid-South (Memphis and Birmingham and Harrisburg, PA.

[18] RAIL Solution is a non-profit organization that has developed the Steel Interstate System concept. (www.steelinterstate.org)

depicted in Figure 22. This is an underserved rail corridor despite the fact that it has some of the highest levels of heavy truck traffic in the United States. Much of this is due to the fact that much of the rail system was laid out in the 1800s and is single-track and winds through the center of villages, towns, and cities. There are 15 grade crossings in Morristown, TN, (pop. 29,000) and five in Abingdon, VA, (pop. 8200), for example.

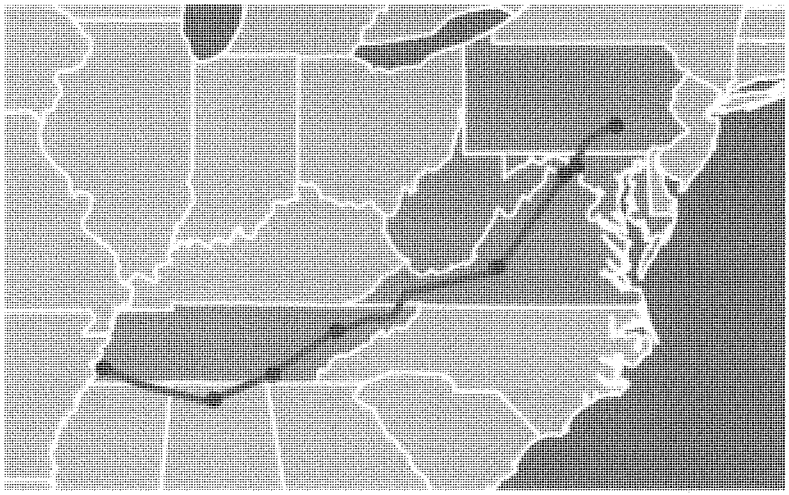

Figure 22. Map of the Route for the Steel Interstate Prototype System

The Valley Corridor Prototype Demonstration route southern terminus is near Memphis, Tennessee at the Norfolk Southern Memphis Regional Intermodal Terminal in Rossville, in Fayette County, Tennessee. The route links consecutively South to North the following cities:

- Huntsville, Alabama
- Chattanooga, Tennessee - links to Birmingham, Shreveport, Dallas, Nuevo Laredo, Mexico and Atlanta
- Knoxville, Tennessee - links to Lexington, KY; Cincinnati, Louisville and Ashville, NC
- Bristol, TN-VA - links to Kingsport, TN and I-26, which links to Asheville, NC
- Roanoke, Virginia- link to Heartland Corridor which runs east and west through Roanoke to the port of Norfolk and to Richmond, VA (mid-way between Bristol and Roanoke, I-77 at Wytheville, VA, links to Charlotte, Winston-Salem, Greensboro, Durham, and Raleigh to the southeast and Charleston, WV, to the north.
- Front Royal, VA- link to Manassas, VA with service to Washington, Baltimore
- Hagerstown, MD- rail and highway links to multiple directions from intermodal terminal at Greencastle, PA, serving New York City, New Jersey, Albany, and New England and Montreal, Canada, Philadelphia, Wilmington, and Trenton.
- Harrisburg, PA- similar links to Greencastle, PA, facility

The route will parallel as closely as feasible the Interstate Highway System routes 1-40, Ii-75, and I-81, which carry some of the heaviest loads of truck freight traffic in the U.S.

The chosen route, superimposed on the interstate highway routes, is shown in Figure 23. Figure 24 shows the region overlay that includes all of geographic region served by the proposed Valley Corridor.

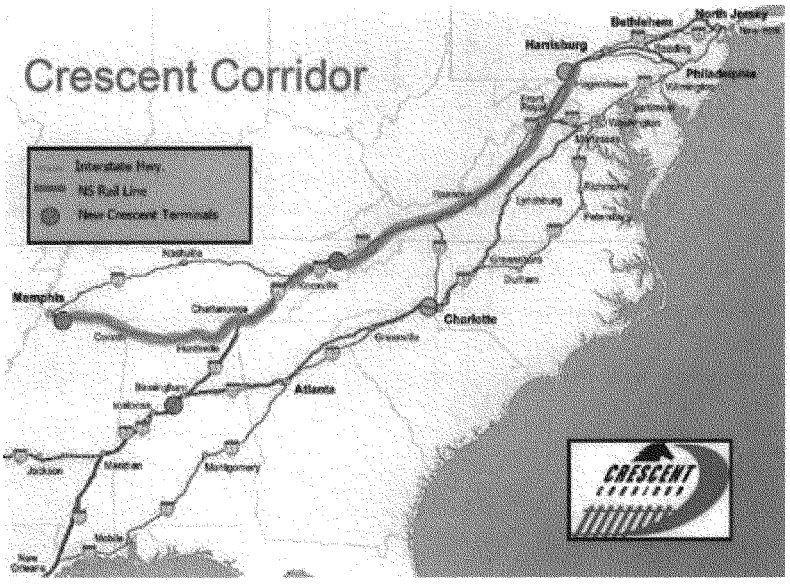


**Figure 23. Valley Prototype Demonstration Route and Interstate Highway routes[19].**

The rail lines will be upgraded to at least two tracks providing bi-directional train traffic, elimination of grade crossing, frequent crossovers from highways and other modes to accommodate general freight, intermodal rail, and passenger traffic at highway-competitive speeds, and positive train control to ensure safe operation. Intermodal freight terminals are being built and planned for the route, and additional loading locations will be provided for loading of trucks onto trains at closer intervals.

The operating speed design criteria will be as follows:

- Freight train speed range: 60 to 75 MPH, with target average point-to-point speed of 60 MPH
- Intermodal train speed range: 70 to 90 MPH, with target average point-to-point speed of 70 MPH

[19] Map taken from Presentation, Roger Bennett, Director or Industrial Development, Norfolk Southern Corporation, *Norfolk Southern – Intermodal Future* to Transportation Research Forum, Washington, DC Chapter, October 20, 2010.

- Passenger train speed range: 79- 115 MPH, with target average point-to-point speed of 90 MPH

The target average point-to-point speed includes the time for stops, changing tracks, and other operational slow-downs that decrease the overall system average speed.

Features that make the route attractive for demonstration include: its service to a region that is underserved by intermodal freight, parallel interstate highways that are crowded with truck freight, a large volume of potential truck freight that can be attracted to intermodal rail, 1000 mile length, and intersection with other feeder lines, hubs, and highways. This provides an excellent prototype demonstration route where attractiveness to both long range and mid-range trucks can be tested.

The route chosen offers the potential for passenger service both within the demonstration route and through connections from the demonstration route to large cities and hubs at reasonably short distances.

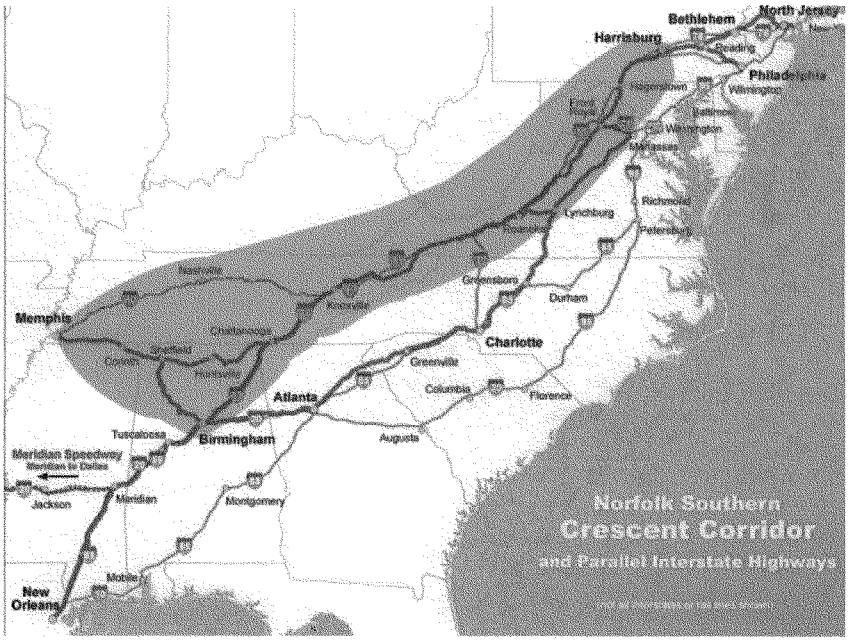


**Figure 24. Overlay of region of the Valley Demonstration Route**

### 6.1.1. Features of the Valley Corridor Demonstration Route

The following are the key features of the route.

- **Density of Freight Traffic in corridor.** I-40, I-75, and I-81 all three exhibit very high volumes of truck traffic, much of which would be targeted for diversion to the SIS Prototype. Tables 5 and 6 contain estimated volumes of truck traffic existing on the SIS Prototype Demo route. Table 5 is based on Tennessee DOT projections of growth rate in Tennessee, and Table 6 is based on Virginia growth rates applied to both states. These estimates are derived from the studies of the Virginia DOT[20] and the Tennessee DOT[21] and are considered conservative because they are based on assumptions of stable diesel fuel price and rail service concepts that are not designed to attract the a higher proportion of the truck freight market.

**Table 5. Estimate of Diversion of Trucks in Memphis-Knox and I-81 Corridors-TN Growth Rate for Future in Tennessee**

| | Annual Trucks | Low Speed (35 mph) | | Higher Speed (60-70 Mph) | |
|---|---|---|---|---|---|
| | | 2008 | 2035 | 2020 | 2035 |
| Memphis-Knoxville Route | Total Thru | 1,042,000 | 1,633,000 | 1,304,000 | 1,633,000 |
| | % Diverted | 39 | 39 | 50 | 50 |
| | Diverted | 406,000 | 636,000 | 652,000 | 817,000 |
| Virginia I-81 Corridor | Total Thru+ | 1,762,000 | 3,713,000 | 3,815,000 | 5,388,000 |
| | %Diverted | 39 | 39 | 50 | 50 |
| | Diverted | 687,000 | 1,448,000 | 1,907,000 | 2,693,920 |
| | | | | | |

**Table 6. Estimate of Diversion of Trucks in Memphis-Knox and I-81 Corridors- Using VA Growth Rate for Future in Tennessee**

| | Annual Trucks | Low Speed (35 mph) | | Higher Speed (60-70 Mph) | |
|---|---|---|---|---|---|
| | | 2008 | 2035 | 2020 | 2035 |
| Memphis-Knoxville Route | Total Thru | 1,042,000 | 2,196,000 | 2,256,000 | 3,186,000 |
| | % Diverted | 39 | 39 | 50 | 50 |
| | Diverted | 406,000 | 856,000 | 1,128,000 | 1,593,000 |
| Virginia I-81 Corridor | Total Thru+ | 1,762,000 | 3,713,000 | 3,815,000 | 5,388,000 |
| | %Diverted | 39 | 39 | 50 | 50 |
| | Diverted | 687,000 | 1,448,000 | 1,907,000 | 2,693,920 |
| | | | | | |

- **Truck Diversion Potential Estimates by Norfolk Southern**

[20] Feasibility Plan for Maximum Truck to Rail Diversion in Virginia's I-81 Corridor, Cambridge Systematics for the Virginia Department of Transportation, April 15, 2010.

[21] TDOT Final Freight Analysis, Cambridge Systematics for Tennessee Department of Transportation- June 2010

Truck diversion potential has been estimated by Norfolk Southern, conclusions of which are shown in Figure 25. The diversion potential estimates are considerably higher than those of the state Departments of Transportation. In particular, the city pairs of the graph that are relevant to the Prototype Demonstration are Memphis-Northeast and the Birmingham-Northeast, both of which show high diversion potential.

Much of the truck traffic (possibly as much as 80 percent[22]) on the interstate highway paralleling the Demonstration route is long haul or medium haul (400 to 500 miles). Medium and long haul would be targeted by the Valley Corridor Prototype.

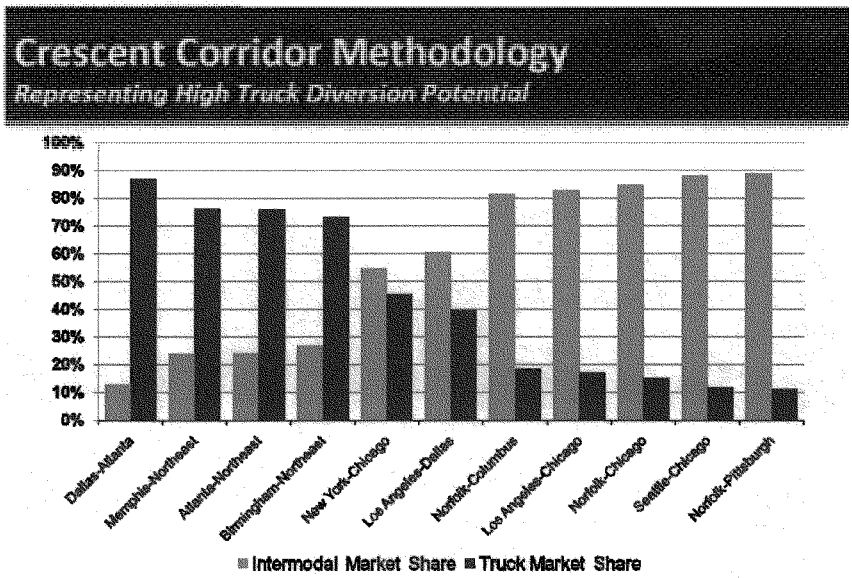


**Figure 25. Diversion Potential for various traffic pairs in the Norfolk Southern Crescent Corridor[23]**

[22] I-81 Multimodal Corridor, Virginia Statewide Multimodal Freight Study, Final Report, 2010, Part III, Cambridge Systematics, Pg 27. Page 27 states that "Over 77 percent of the total freight tonnage moving within the Corridor is through traffic." That includes truck and rail traffic.

[23] From Presentation, Roger Bennett, Norfolk Southern Corporation, Norfolk Southern – Intermodal Future to Transportation Research Forum, Washington, DC Chapter, October 20, 2010.

- **Other truck traffic and truck diversion studies of interest**

There are, of course, many studies over the past 10 years of various parts of the I-40, 1-75, I-81 corridor. One of the more interesting ones supports the fact that much of the heavy truck traffic in this corridor is long distance. This is illustrated by Figures 26 and 27, which are based on data for truck traffic from Chattanooga to the Virginia border[24]. This would be over I-75 to Knoxville, I-40 to I-81 west of Knoxville, and I-81 to the Virginia border. Data show that over 90 percent of the trips from Chattanooga to the Virginia state line are over 1000 miles, and there are an average of 4500 daily trips to and from the Virginia line.

## Over 90 % of I-75 Trips from Chattanooga to VA State line are over 1000 miles.

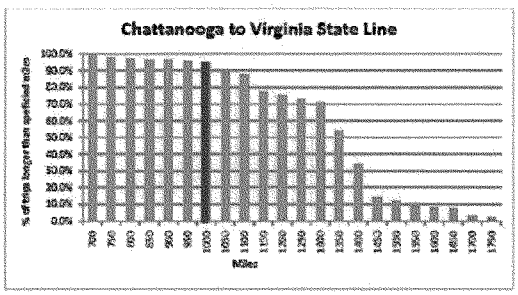


Figure 4-4: Trip Length Distribution for I-75 Trucks (Chattanooga to VA State Line)

Reference: TDOT I-75 Corridor Study- Task 3 Multi-modal Considerations (2010)

**Figure 26. Percent of Chattanooga-Virginia trucks that are long distance.**

[24] Reference: TDOT I-75 Corridor Study- Task 3 Multi-modal Considerations (2010)

# I-75 truck traffic on the order of 4500 daily on Chat. to VA border route

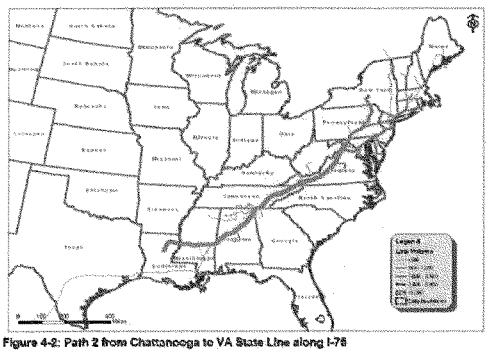

Figure 4-2: Path 2 from Chattanooga to VA State Line along I-75

Reference: TDOT I-75 Corridor Study- Task 3 Multi-modal Considerations (2010)

**Figure 27. Number of trucks daily between Chattanooga and Virginia**

So how much traffic can be diverted? The Tennessee studies reference this lookup table, given in Figure 28[25]. A convention is used to express how much truck traffic would be diverted. This convention is in fair agreement with part of Figure 25 (the data of Norfolk Southern) where intermodal rail is not competitive, but is not in agreement with parts of Figure 25 where intermodal rail is competitive. The lookup table would not seem to have much validity for a parallel rail system built for serious intermodal competition with truck freight. Therefore, its use to determine policy about whether to invest in intermodal rail and not in more highways is suspect.

[25] Reference: TDOT I-75 Corridor Study- Task 3 Multi-modal Considerations (2010)

## The I-75 TDOT study used a lookup table to define freight that can be diverted.

**Table 4-4: Distance-Based Freight Diversion Lookup Table**

| Distance between Origin and Destination | % of Freight that could be Diverted |
|---|---|
| 500-750 miles | 10 |
| 750-1000 miles | 15 |
| 1000-1250 miles | 20 |
| 1250+ miles | 25 |

Reference: TDOT I-75 Corridor Study- Task 3 Multi-modal Considerations (2010)

**Figure 28. Lookup table for truck diversion percentages.**

- **Potential for Supporting Passenger Service**

First, it should be noted that the Valley Corridor is not served by rail passenger service except for east-west crossings, and then only in Virginia, West Virginia, , and Pennsylvania. There is no service south of Staunton, Virginia until Birmingham or the Chicago-New Orleans train intersecting at Memphis.

The Valley Prototype Demonstration has the potential to support SIS speed passenger traffic service to these cities within the Prototype Demonstration route:

- Memphis - Chattanooga:
  - Cities in Tennessee: Memphis, Germantown, Collierville, and Chattanooga.
  - City in Mississippi: Corinth.
  - Cities in Alabama: Sheffield (Florence, Muscle Shoals), Decatur, Huntsville, and Scottsboro.
- Chattanooga - Harrisburg:
  - Cities in Tennessee: Chattanooga, Cleveland, Athens, Sweetwater, Loudon, Lenoir City, Farragut, Knoxville, Jefferson City, Morristown, Greeneville, Johnson City (Kingsport), Bristol.
  - Cities in Virginia: Bristol, Abingdon, Marion, Wytheville, Radford, Christiansburg (Blacksburg), Roanoke, Buena Vista (Lexington), Waynesboro (Staunton), Elkton (Harrisonburg), Luray, and Berryville (Winchester).
  - City in West Virginia: Charles Town

- City in Maryland: Hagerstown
- Cities in Pennsylvania: Shippensburg, Chambersburg, and Harrisburg.

The potential for connection to the following highly desired destinations will exist:

- Chattanooga to Atlanta addition, making feasible Bristol and Knoxville to Atlanta service, and Memphis and Huntsville to Atlanta Service.
- Chattanooga to Birmingham addition, making feasible Bristol and Knoxville to Birmingham service.
- Connection to Virginia Rail service, making feasible service from Bristol and Roanoke to Lynchburg, Northern Virginia, and Washington.
- Connection to Amtrak service at Staunton, VA, east to Charlottesville, Washington and the NE, and west to West Virginia, Ohio, and Chicago.
- Connection to Amtrak at Martinsburg, WV east to Washington DC and the NE and west to Pittsburgh, Cleveland, Canada, and Chicago
- Connection to Amtrak at Harrisburg, PA east to Philadelphia, New York, New England, and Canada, and west to Pittsburgh, Cleveland, and Chicago

The experience with Virginia Rail indicates that there is demand for rail passenger service extension in Virginia. The three-year-old daily Northeast Corridor service between Lynchburg, VA, and Boston has exceeded by double anticipated ridership from Virginia stations. This new route is the second best financially performing Amtrak-state partnership route in the nation.

In Tennessee, the demand for the service has not been studied extensively. However, it is noted that there is a proposal for very high speed rail from Chattanooga to Atlanta. Steel Interstate passenger rail would probably be adequate to assure high ridership in that market. The distance is approximately 125 miles. At an average of 90 mph, which would be achieved by SIS rail, the full trip would take about 1 hour-25 minutes. From Knoxville to Atlanta, at a distance of 220 miles would take 2 hours-30 minutes. (The flying time from Knoxville to Atlanta is 1 hour, and the cost ranges from $300 to $500, with extra travel time required between airports and downtowns.)

### 6.2. Correlation of Valley Corridor Prototype Route to national service requirements

The vision for the National Rail Plan will be met by the Valley Corridor Prototype Demonstration of the SIS over the chosen Memphis to Harrisburg route.

- **Meets Regional Corridors requirements**. The Prototype meets the criteria for regional corridors as required by the national plan. The Prototype connects mid-sized urban areas, as illustrated by the cities Memphis, Huntsville, Chattanooga, Knoxville, Bristol (Tri-Cities, TN/VA), Roanoke, and Harrisburg. Many smaller communities are served, including such towns and cities as Chambersburg, PA; Hagerstown, MD; Front Royal, VA; Luray, VA; Waynesboro, VA; Staunton, VA; Christiansburg-Blacksburg, VA; Wytheville, VA; Abingdon, VA; Morristown, TN; Sheffield, AL; Florence, AL; and Corinth, MS. This will be done with convenient, frequent 60-115 mph service on a mix of dedicated and shared track. Provisions exist for connection to core Express corridors at Memphis, Harrisburg, and any Chattanooga-Atlanta service.

- **Meets Emerging System requirements.** The Prototype connects to regional urban areas (Memphis and Harrisburg) and the mega regions of the Southeast and the Northeast at speeds up to in the range of 60-115 mph on shared track.

- **Meets Requirements for future community connection.** The Prototype is within the corridors required for connection to major hubs and regions thus meeting the requirement for provision for future community connections.

- **Meets Speed, Reliability, and Safety requirements.** Design and operational standards for the SIS Prototype demo will meet all requirements for fast rail. The SIS will provide greatly improved performance in these areas.

- **Meets requirements for fuel economy, less environmental impact, and less overall cost.** The use of electrified system will demonstrate lower costs, less environmental impact, and less use of petroleum products. Further, the overall cost of capital and operations cost will be less than competing solutions using conventional highway construction for increased freight capacity, petroleum based fuels, and less economical service for personal travel on air and private automobiles.

### 6.3. Condition of Alignment and Operating Systems

Although the current alignment of the Prototype Demonstration route is continuous, it is now mostly single track. The system accommodates speeds typically between 25 and 60 mph. In addition, it has a very high number of grade crossings and even some crossings of mainline tracks of other rail systems. In some areas, the alignments have small radius curves that will need to be removed. Other problems are high local grades that will need to be reduced. One of the main problems is the location of tracks that go through cities and towns. Many of these segments will need to be relocated, or railway berms or channels will be required for noise abatement and/or elimination of grade crossings. In addition, some rights-of-way may not be wide enough.

### 6.4. Design basis for the Valley Corridor Prototype Demonstration

The design basis for the SIS Prototype Demonstration will be based on the following criteria:

- **Multiple through tracks**. Main lines would have at least two through tracks, so that trains can be handled in both directions without having to stop and meet oncoming trains.
- **Electric motive power**. Electric motive power means that the SIS network will be powered by electricity, provided to electric locomotives from a system of overhead wires called catenaries.
- **Grade separated alignment of tracks**. Grade-separated means that rail lines of the SIS Prototype will not cross roads and highways at grade, but will pass over or under using bridges or underpasses.
- **SIS Prototype will be precursor to core network**. Core network means that the SIS prototype will be part of the future national backbone of SIS-caliber railroad main lines.
- **Speed criteria will be to meet the 60-115 mph range for the total prototype demonstration system speed range.** The operating speed design criteria will be as follows:
    - Freight train speed range: 60 to 75 MPH, with target average point-to-point speeds 60 MPH

- Intermodal train speed range: 70 to 90 MPH, with target average point-to-point speeds 70 MPH
- Passenger train speed range: 79- 115 MPH, with target average point-to-point speeds 90 MPH

The speed will be 60 mph for some parts of the system where a general freight train is operating. The maximum will be 115 mph, and that will be when a passenger train is operating at top speed on the system.

### 6.5. Issues to be addressed by the Valley SIS Prototype Demonstration

The Valley SIS Prototype would demonstrate the following relative to he ability of the Steel Interstate to meet a high standard of performance goals.

- Application of the Steel Interstate concept to a system that is underserved by intermodal freight and passenger service.
- A Fast rail system operating in 60 to 115 mph range, with a target average or point-to-point speed of 90 mph for passenger, 70 mph for intermodal, and 60 mph for general freight.
- Operational control a system with a combination of traffic, including general freight, intermodal, and passenger traffic, operating at different speed ranges.
- Diversion of a high percentage of truck freight traffic to fast speed rail.
- Successful operation of freight rail service and passenger rail service on the same system.
- Reduction of environmental impact of freight transportation systems.
- Reduction of requirements for expanded interstate highway lanes and systems to accommodate trucks.
- Improved public safety.
- Reduction in energy required for transport of freight.
- Removal of impediments to investment in fast rail.
- Determination of economic viability for fast freight rail.
- Acceptance of higher speed rail as a highly desired solution to transportation of freight and passengers by rail.

### 6.6. Budgetary Estimate for the Valley Steel Interstate Prototype

RAIL Solution has prepared a budgetary estimate, or a estimate of the order of magnitude of the cost of the Valley Steel Interstate Prototype System - approximately 1000 miles of multi-tracked, grade-separated, fast speed rail (top speed 115 mph). The estimate, shown in Table 7, is based on factors and costs compiled from various literature sources. The total cost is $13.375 billion.

**Table 7. Estimate for Construction of the Valley Steel Interstate Prototype (1000 miles)**

| | $ Billions |
|---|---|
| Rail Trackage | 6.875 |
| Added Railroad Right of Way | 0.750 |
| Buildings and Stations | 0.250 |
| Grade Crossing Elimination | 0.875 |
| Electrification (Optional) | 2.875 |
| Engineering and Project Management | 1.75 |
| **Total** | **$13.375** |

### 6.7. Financing the Valley Steel Interstate Prototype System

Financing of the Valley Steel Interstate Prototype System would need to follow the principles outlined previously in the discussion of financing the National Steel Interstate System. Financing would need to come from one or more of these sources: government guaranteed loans to Norfolk Southern, private capital, private capital from tax credits, private capital from repatriation of profits held overseas.

The distribution of costs to various entities are given in Table 8.

**Table 8 . Allocation of Cost to Partnership Entities (Government Guaranteed Financing)**

| | Percent | $Millions |
|---|---|---|
| Grants from Federal Government | 1.7 | 227 |
| Loans Guaranteed by Federal Government | 48.6 | 6,500 |
| State Governments (90% Federal, 10% State) | 8.1 | 1,083 |
| Local Governments (80% Federal, 20% State-Local) | 2.0 | 268 |
| Railroad Company Resources | 7.8 | 1,043 |
| Private Capital (bonds) | 30.1 | 4,026 |
| Private Capital - direct invest | 1.7 | 227 |
| **Total for Steel Interstate System** | | **$13,375** |

Private corporations (Norfolk Southern) would pay for 88 percent of the cost, and 12 percent of the costs would be borne by governments, primarily the Federal Government. The origin of funds for local government participation (for station and terminal infrastructure) would depend on the financial sharing of each respective state. Most of the funds, however, would be funds allocated from Federal government resources.

Previously, we discussed the possibility of funding the national Steel Interstate System from various new revenue from tax credits, import tariff, and repatriation of profits. If one or more of the methods of raising additional revenue is implemented, the need for government guaranteed loans will be less or non-existent.

#### 6.7.1. Ability to finance the Valley Corridor Steel Interstate Prototype from current revenue of the Norfolk Southern

The question does arise shouldn't Norfolk Southern pay for the Valley Corridor Steel Interstate Prototype System from current revenue, and the answer is "No, Norfolk Southern cannot afford such an expense." Why? The current planned capital expenditure of the Norfolk Southern for 2013 is approximately $2 Billion[26]. Of this, approximately $600 million is for infrastructure improvement. But, the system has 20,000 route miles in 22 states[27]. The Valley Corridor represents just 5 percent of the system. Assuming that the construction of the Valley Corridor Steel Interstate project is 10 years in length and that the project would have higher priority in the NS system, there might be available from NS resources 20 percent of the available infrastructure budget, a demonstrably high figure for NS that would total $120 million per year or $1.2 billion total. That represents the railroad company resources in the financing Table 8, an amount of $1.043 Billion in the table. Thus, other sources must be provided.

### 6.7.2. Ability of the Valley Corridor Steel Interstate Prototype System to repay debt.

Will the Valley Steel Interstate Prototype System be able to pay the amount of debt incurred and give a rate of return on investment to justify the capital outlay? While we do not have access to the internal costs and analyses of Norfolk Southern, we have analyzed this issue from the standpoint of incremental differences in cost saving and increased traffic.

The basic parameters for the Valley Corridor Prototype of interest are: 1) amount of traffic increase due to the investment, 2) fuel savings from conversion to electric motive power, and 3) effect of implementing passenger traffic on the route.

- **Traffic Increase**

For the Valley Prototype, the primary traffic increase would be from intermodal service by diversion of a larger percentage of trucks from the parallel and feeder interstates. We used the data of Tennessee and Virginia for truck volume, and interpolated the data to project truck volume from 2023 to 2035, with 60% diversion of medium (500 miles) and long (1000 miles or more) distance trucks. The year 2023 would be the first year of full operation of the Valley Corridor Prototype System.

The ability to pay back indebtedness is based on the incremental increases on the route using the recent historical operating cost and earnings data of the Norfolk Southern.[28] Revenue for passenger service was based on the Lynchburg Northeast Corridor train implementation experience.[29]

The number of trains is based on conversion of trucks diverted to trains, using about one-half the maximum capability of intermodal trains, but equivalent to the size of average freight hauling trains on the Norfolk Southern. The number of trains

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[26] http://www.railjournal.com/index.php/north-america/norfolk-southern-issues-2013-capital-expenditure-plan.html

[27] http://www.nscorp.com/nscportal/nscorp/Media/Corporate%20Profile/
[28] http://www.annualreports.com/HostedData/AnnualReports/PDFArchive/nsc2009.pdf
[29] http://www.newsadvance.com/news/local/article_755493f6-8272-11e2-bd8a-001a4bcf6878.html

assumed are given in Table 9. The estimate of trucks is based upon the average of Tennessee and Virginia through-trucks, and assumes that 50 percent of such trucks are diverted. RAIL Solution believes that higher speeds should divert a higher percentage. Also, the open intermodal system should attractive more trucks, especially opening the system for owner-operated trucks, trucks traveling medium distances, crane-lift incompatible trailers and tankers, not dry vans, and not destined for super-sized terminals at the ends of corridors.

**Table 9. Number of trains assumed for the Valley Steel Interstate Prototype System**

| | Trains per day | | |
|---|---|---|---|
| | **Start** | **Intermediate** | **Max** |
| Freight | 14 | 16 | 18 |
| Intermodal | 28 | 44 | 62 |
| Passenger | 8 | 14 | 20 |
| | 50 | 74 | 100 |
| **Estimate of Trucks per day diverted to rail** | **3920** | **6300** | **8680** |

The operating expense ratio for Norfolk Southern of 75.4 percent in 2009 was used as the basis for the availability of funds to pay off loans. Thus, 24.6 percent of the operating revenues were assumed to be available to pay off the loans guaranteed by the government. The revenue for passenger rail was based on the margin of revenue above costs for the Lynchburg train experience. The experience was extrapolated on a per mile basis to the length and number of miles of the Valley Corridor Steel Interstate Prototype. Actually, more funds than this estimate may be available as Norfolk Southern has undoubtedly built in a margin above operating expenses for the Lynchburg train.

Concerning cash flow, the margin above operating expense for the first 10 years progresses from $350 million the first year to $750 million in the 10th year. In addition, when electric systems are substituted for diesel, the fuel savings on the system progresses from $115 million the first year to $250 million in the 10th year, because of the relative efficiency of the electric motive power systems over diesel (2.75 Btu Diesel output=1 Btu output for electric system). Thus, in the first year, as much as $465 million is available to pay off indebtedness, and in the 10th year, $1 billion. The break even point on paying off indebtedness (where cumulative margin exceeds cumulative payments on debt) is 8 years for the non-electrified Valley Steel Interstate Prototype and just 2 years for the electrified system.

The overall profitability of the investment for Norfolk Southern is quite large. Using the $1 billion actual out-of-corporate treasury investment of the NS initially, the present value of that investment, after 10 years, is projected as $2.5 billion. So, the figures, as rough as they are, indicate that the Valley Corridor Steel Interstate would certainly pay for itself and could start operating with a margin above operating expenses very quickly.

### 6.8. Regional Benefits of the Valley Corridor Steel Interstate Prototype

The benefits parallel the benefits discussed for the National Steel Interstate System under Section 3. We want to discuss here some of the particulars of these benefits to the Valley Corridor Steel Interstate Prototype region.

The Valley Corridor Steel Interstate Prototype will directly serve directly about 13 percent of the population of the United States. Here are the components of the direct service:

- Appalachian Regional population: 25 Million in 2010[30]
- Service directly outside of the ARC region: a part of state populations with a total population of about 130 Million, about 40 percent of the population of the U.S. It is estimated that the Valley Corridor Steel Interstate Prototype will serve a total of about 40 million people (those within the 150 mile distance of the system) directly, which is about 13 percent of the U.S. population. It will be carrying freight between large regions of population, including Texas and Mexico on one end and New York, New Jersey, and New England states on the other end.

See the extended map (Figure 29) of the Crescent Corridor by Norfolk Southern[31].

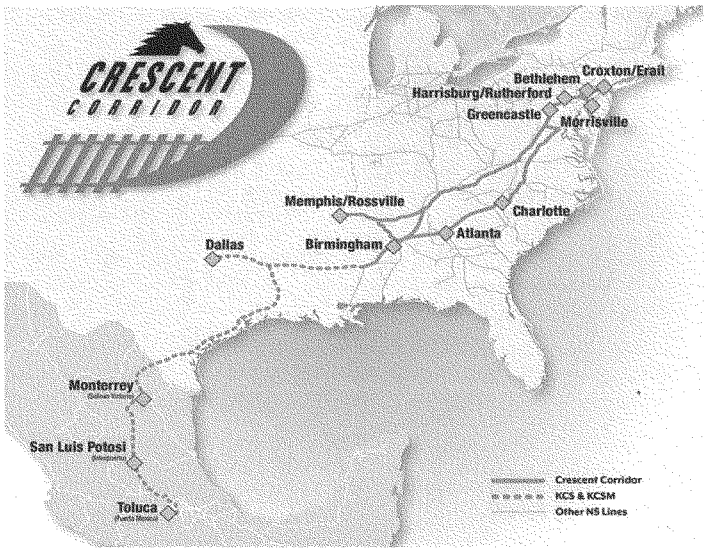



**Figure 29. Extended Map of the Crescent Corridor showing extensions to Texas and Mexico.**

[30] http://www.arc.gov/reports/custom_report.asp?REPORT_ID=41
[31] http://www.nscorp.com/nscintermodal/Intermodal/

Another map (Figure 30) of the Norfolk Southern shows the extension of the Crescent Corridor to New Jersey and south to New Orleans.

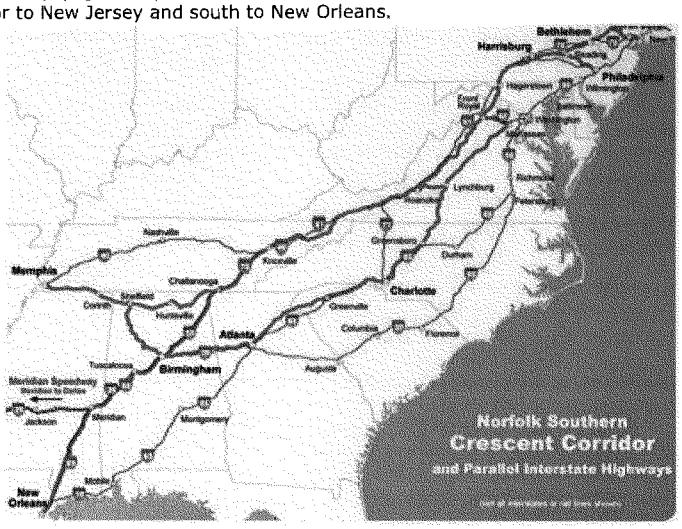



**Figure 30. Crescent Corridor of the Norfolk Southern - New Orleans to New Jersey.**

### 6.8.1. Cost of Transportation

The cost of transportation should hold at predictable lower values than might otherwise be the case for transportation that continues almost exclusively to depend upon the provision of expanded and new highways. Lower cost should be experienced because more genuinely competitive modes will operating in parallel, and alternative transportation, such as passenger rail will be increasing available. A train ticket will cost less than travel by car and/or plane up to medium distances.

### 6.8.2. Economic Impact of the Valley Corridor Steel Interstate Prototype

The effect on business development in the region would be significant. Of course, there is the direct benefit of construction and building activity throughout the Valley Corridor that would occur if the prototype is implemented. One of the reasons for increase of business and regional development will be the access to distant markets provided by more closely spaced terminals along the corridor.

Figure 31 presents a layout of the proposed terminals for the Valley Corridor.

# More access to rail is needed in the region.

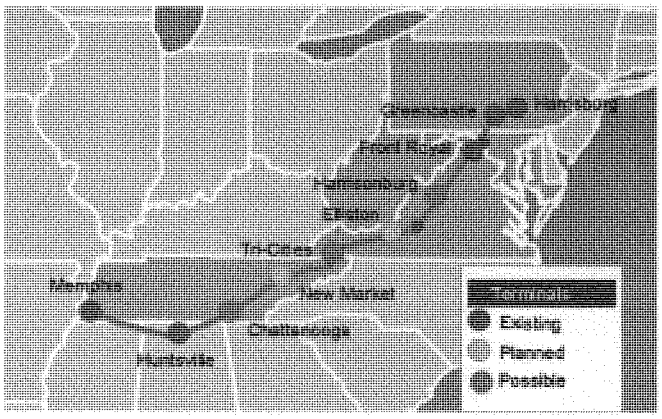


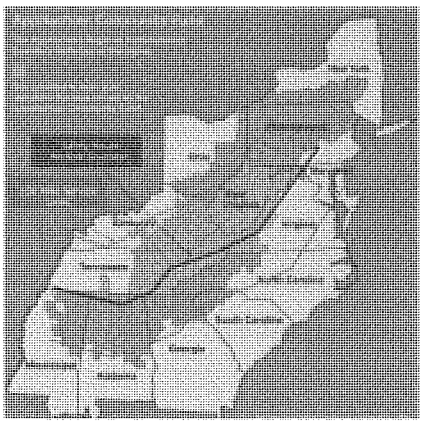

**Figure 31. Plan for open intermodal terminals of the Valley Corridor Steel Interstate Prototype.**

This proposal for closer spaced terminals along the Valley Corridor facilitates greater utilization of SIS services by the various cities throughout the region. Employing open intermodal services at these terminals greatly broadens potential customer base to include non-crane lift compatible classes of trucks and small operators who cannot afford to lose control of their loads and instead use their rest time to keep moving along with their trucks on the rails.

At the present time, the only terminals are at Memphis (and at Huntsville and Birmingham) and Greencastle in Pennsylvania. Front Royal in Virginia is on the Piedmont leg of the Crescent Corridor, not the Valley Corridor.

The economic impact can be seen from Figure 32 showing the geographical reach where the potential for economic activity could be generated by proximity to services offered by this state-of-the-art intermodal corridor.

## The Valley Route should serve Appalachia.



Intermodal Terminals

- Memphis
- Huntsville
- Knoxville-North*
- Roanoke-South*
- Greencastle
- Harrisburg

* Planned

Note: Smaller more frequent intermodal systems are proposed by Rail Solution.

**Appalachian Regional Commission is a potential partner.**

**Figure 32. Geographic coverage of the Valley Corridor Steel Interstate Prototype**

This figure only lists the presently planned terminals. It does not show additional terminals proposed in the previous figure. The service band for 150 miles (3 hours travel time) on either side shows a large geographic footprint covering most of the Appalachian Regional Commission region, which are underdeveloped economically. The Steel Interstate will attract manufacturing and logistics industry, just as the very large mega-terminals have attracted such industry in such cities as Memphis, Atlanta, and Harrisburg. RAIL Solution has been in negotiations with transportation staff at the Appalachian Regional Commission (ARC). We anticipate that the ARC would want to be a player in helping to implement such innovative transportation services in a region characterized by being by-passed when innovative transportation technology is being implemented.

Also, the passenger service would bring this option to a region that has no North-South passenger service and East-West service only in its northern communities. The region has been almost completely neglected in planning of passenger trains for America. The services this would bring are detailed previously.

**6.8.3. Social Benefits**

- **Health and Safety**

The health and safety benefits parallel those of the national system, but these benefits are even more imperative for the region to be served by the Valley Steel Interstate Prototype. Knoxville, for example, is ranked in the top 20 for atmospheric pollution[32], frequently trapped in valleys by surrounding ridgelines. Much of the smog-generating nitrous oxides comes from growth in vehicular traffic, and particulate from more diesel-powered trucks. Growing vehicular movement, as shown in Figure 33, accounts for most of the growth in the state's carbon dioxide emissions.

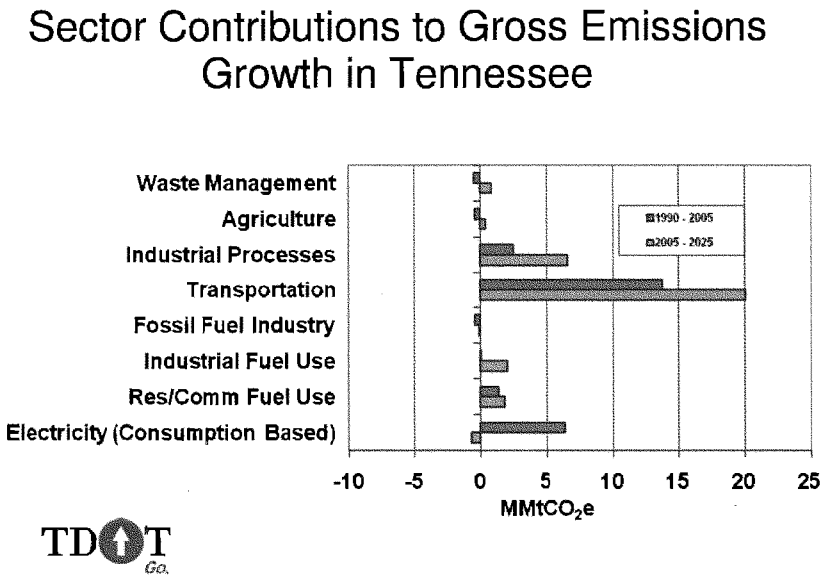



**Figure 33. Growth in carbon emissions across Tennessee industrial sectors, Tennessee Department of Transportation I-40/I-81 Corridor Study.**

While the preponderance of airborne pollution in Tennessee is emitted from coal-fired power plants, those sources are declining rather than growing. There will be fewer deaths from respiratory diseases in Tennessee and across the region if the Valley Corridor Steel Interstate reduces growth in interstate truck miles traveled. Also the

[32] http://www.forbes.com/pictures/mef45ejdj/15-knoxville-sevierville-la-follette-tn/

Steel Interstate will reduce accidents and fatalities by elimination of grade crossing and reduction in number of trucks on the highways[33].

- **Environment**

If the system is electrified, the reduction of oil use will amount to 20 Million barrels per year averaged over the first ten years. There will be a proportional decrease in greenhouse gases, simply by diverting hundreds of thousands of trucks to rail – even when the locomotive operates on diesel power. Converting locomotives to electric power will further reduce emissions, even employing the mix of fossil fuels generating power today. If the additional electricity required to run the Valley Corridor is generated by renewable or nuclear power sources, greenhouse gas emissions will drop even more dramatically.

There will be less road building, and the footprint of widening the rail lines because of additional tracks will not have the impact of roads. Runoff of polluted water into streams and the threat of toxic spills would be reduced because rail transportation of hazardous chemicals is considerably safer than truck. Railroads and trucks carry roughly equal hazmat ton-mileage, but trucks have 16 times more hazmat releases than railroads. Statistically, railroads are the safer form of transportation for hazardous materials.[34]

- **Transportation choices**

If the terminals are distributed and there is an open intermodal system, businesses and individuals throughout the Valley Corridor will have a choice of intermodal rail or long-distance trucking. This system will provide very quick access to the international air shipping terminals at Huntsville and Memphis. Additional freight service could be provided to Dulles and Baltimore-Washington International airports from the Valley route.

The passenger service capability of the Steel Interstate would bring this option to most of the communities of the region.

### 6.9. Proposed Feasibility Study

Rail Solution has been discussing with state and local government officials and Norfolk Southern officials undertaking a feasibility study for the Valley Corridor Steel Interstate Prototype. The feasibility study is estimated to cost $5 million, not including the in-kind effort of Norfolk Southern. The criteria for the proposed study is given in Appendix A. "Proposed Multimodal Feasibility Study of the Valley Corridor, Organization and Criteria."

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[33] Steel Interstate Website, Rail vs. Truck and Auto Safety Record, http://steelinterstate.org/topics/rail-vs-truck-and-auto-safety-record

[34] ["Hazmat Transportation by Rail: An Unfair Liability", Association of American Railroads, Policy & Economics Dept., January, 2009, pgs. 1-2. In Spraggins, H. Barry, *The case for rail transportation of hazardous materials,* Journal of Management and Marketing Research]

## 7. ACKNOWLEDGEMENTS

This work is the result of efforts of RAIL Solution, a not-for-profit, 501(c)(3) organization, that studies and advocates modernization of the North American Rail systems, primarily by implementing the concepts of the Steel Interstate System. Individuals contributing to this testimony are Rees Shearer, Chairman (Emory, Virginia); David Foster, Executive Director (Salem, Virginia); Michael Testerman, Vice Chairman (Richmond, VA), and directors of RAIL Solution, Ken Marsh (Kingsport, TN), Jeff Price (Wycombe, PA). Leslie McCarthy (Villanova, PA), Steve Sondheim (Memphis, TN), Barbara Walsh (Lexington, VA), Bob Peckman (Roanoke, VA). Rucker Keister (Lynchburg, VA), Walter Clark (Maurertown, VA), and A. L. (Pete) Lotts (Knoxville, TN).

# The Steel Interstate System
## A 21st Century Railroad Network for the United States*

*Testimony for the Panel on 21st Century Freight Transportation, Committee on Transportation and Infrastructure, U.S. House of Representatives,
By A. L. Lotts, Director, RAIL Solution[1], 11125 Hatteras Drive, Knoxville, TN 37934

## Appendix A.
## Proposed Multimodal Feasibility Study of the Valley Corridor Organization and Criteria

### Introduction

**1. TPO approach to regional transportation Feasibility Study**

a. Objective - to conduct a feasibility study for a multimodal transportation system with a planning horizon of 25 years.

b. Study Area for the Feasibility Study - As depicted in Figure 1, the primary study area for the feasibility study is the Valley Corridor, which is defined by the rail and interstate highway routes between Memphis, TN and Harrisburg, PA. The route connects the Mid-South and Southwest with the Northeast via the northern route (Valley Route) of the Norfolk Southern Railroad and the highway routes of I-40, I-75, and I-81. The route major terminals at each end of the Valley Corridor are in the areas of Memphis, TN and Harrisburg, PA. Rail traffic from McCalla, located south of Birmingham, AL could easily be routed via the Valley Corridor as an option to the Piedmont Route.

c. Primary feeder rail lines and interstate highways - The Valley Corridor is fed by rail lines of Norfolk Southern and other railroads at Memphis and at Harrisburg by Norfolk Southern. Interstate highways that feed the Valley Corridor may include I-78, I-76, I-70, I-66, I-77, I-26, I-65, I-59.

d. Relationship of the Valley Corridor to the Crescent Corridor - The Valley Route is a part of the Norfolk Southern Crescent Corridor, which extends between Texas and Mexico and up to Memphis on the Southwestern end and Harrisburg, Philadelphia, and New Jersey terminals on the Northeastern end.

[1] RAIL Solution is a 501(c)(3) non-profit organization that has developed the Steel Interstate System concept. (www.steelinterstate.org)

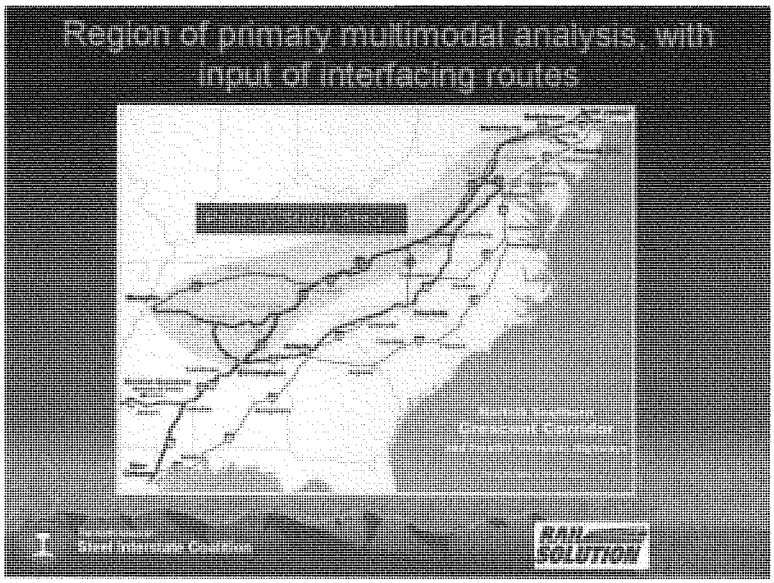


**Figure 1. Primary Study Area for the Valley Corridor**
**(Photo from Norfolk Southern, overlay in green is the Valley Corridor.)**

e. States hosting the Valley Corridor

1) States through which the Valley Corridor passes include Tennessee, Mississippi, Alabama, Georgia, Virginia, West Virginia, Maryland, and Pennsylvania.

2) States with connecting rail or highway routes to the Valley Corridor include-

- Southwestern or Midsouth end- includes Louisiana, Texas, and Arkansas.
- Southeastern and Mid-Atlantic- includes North Carolina and Georgia.
- Northeastern- includes New York and New Jersey.

**2. Need to achieve reliability, capacity, lower cost, and speed on the rail system**

a. The objectives for the corridor, from perspective of the public, should ideally have these features ultimately:

   1) Removing maximum feasible trucks from I-40, I-75, and I-81, as well a feeder routes and urban connectors through attractive speeds, higher capacity, better reliability, enhanced origin to destination pairs, and lower cost of rail.

   2) Providing all classes of freight delivery at highway competitive speeds and reliability (containers, trucks, bulk freight).

   3) Providing access to a higher speed freight system throughout the corridor, with more local terminals and open access.

   4) Providing the capacity for passenger rail in corridor states for short to medium destinations, in a manner that ensures that passenger trains do not adversely affect freight movement.

   5) Providing potential passenger rail connections to High Speed Rail terminals (e.g. Chattanooga to Atlanta or connection at Harrisburg, PA)

b. The assumed objectives of the Norfolk Southern Corporation are to:

   1) Maintain historic level of profitability and increase the earnings and stock values.

   2) Minimize the risk of undertaking system improvements to maintain market and to increase market share in promising sectors.

   3) Anticipate that Federal and state governments will provide capital for public benefits, including grade separation, passenger service provisions, and regional intermodal terminals, and will assist with right-of-way changes as needed.

   4) Expect that passenger service will not affect transit times for freight, nor will it increase the cost of freight operations to Norfolk Southern.

   5) Expect governments to reimburse infrastructure funding in lieu of what they avoid spending to construct/maintain highway infrastructure.

   6) Anticipate that the Federal government will guarantee loans to prime the financial market pump for strategic application of innovative rail technology.

## Feasibility Study organization and funding

### 3. I-40/I-81 Feasibility Study organization and funding

a. Funded under provisions of MAP-21 for intermodal Projects of Regional

and National Significance with high impact on reducing congestion. (Possibly 80 Fed-20 state or other Split). One question is- "How does the Norfolk Southern effort count in the assessment of other effort?" The Department of Transportation may solicit project proposals for this in summer 2013.

b. Project would qualify per Congressional Research Service for Rep. John Duncan.

c. Feasibility Study would be conducted by a Transportation Planning Consortium led by the Knoxville Regional Transportation Planning Organization.

d. Assistance and participation of Norfolk Southern is essential to the Feasibility Study.

**4. Possible organization of the Feasibility Study**

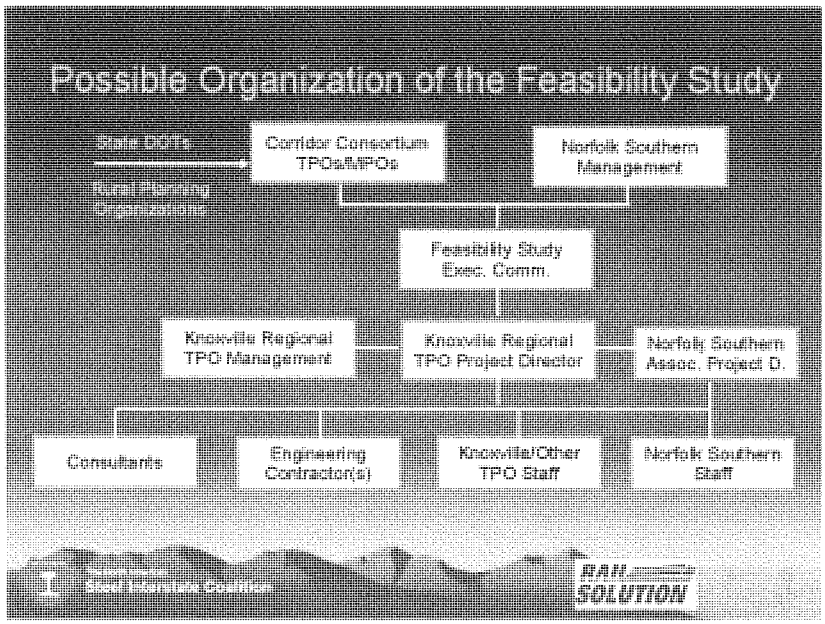


**Figure 2. Organization of the Valley Corridor Feasibility Study**

As depicted in Figure 2, state DOTs and rural planning organizations would be

connected to the feasibility study through the Valley Corridor Consortium. The consortium and Norfolk Southern Management would have members of the Feasibility Executive Committee (6 elected by the MPOs, and 5 appointed by Norfolk Southern). The Knoxville Regional TPO management would appoint a Project Director for the project (appointed from either TPO staff or from a supporting engineering firm). Norfolk Southern would appoint an Associate Project Director to serve as director of the NS effort and assist in the total management of the project.

The Project Director, for the project, would be accountable to the feasibility study Executive Committee. The Executive Committee would have oversight to see that the feasibility study is conducted according to the basic work plan and criteria for the study, and it would review and approve results and documentation. The Executive Committee would have the authority to decide in a timely manner any issue that might arise concerning direction, conduct, or results of the feasibility study.

**5. Potential TPO or MPO members of Feasibility Study Consortium**

Potential members of the Valley Corridor Consortium include member organizations from the planning organizations of the metropolitan statistical areas within the corridor. The potential members are listed in Figure 3.

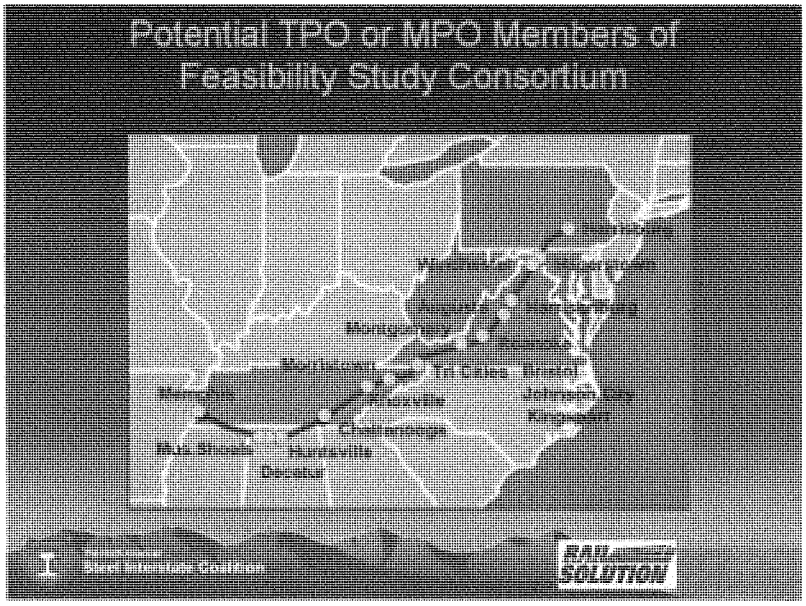


**Figure 3. Potential members organizations are TPOs or planning components of MPOs of the Valley Corridor.**

**Basis for the Feasibility Study, including assumptions**

**6. Region of primary multimodal analysis, with input of interfacing routes**

a. Maximum truck diversion design considers fishbone nature of I-81. The backbone of the Valley Corridor is the Interstate Highways I-40, 1-75, and I-81 and the parallel Norfolk Southern route. The study must consider the traffic patterns that branch to and from that backbone in order to optimize the arrangement of terminals and to project operations. Highway drayage operations that would normally traverse the urban core will be evaluated for interception at new terminals, to eliminate both ongoing highway maintenance costs and societal costs in the urban core.

b. In addition, for much of the traffic, there needs to be a logical assignment of traffic that goes primarily to the Piedmont Corridor or primarily to the Valley Corridor. There is a mixture of traffic that can be routed efficiently on either the Valley or Piedmont Corridor. The capacity of the Piedmont Corridor must be taken into account when considering diversion of truck freight to the Valley Corridor.

c. An example of diversion before the truck freight gets to I-81 is the objective of diverting truck freight from I-77 to the Piedmont Corridor, much of it to the terminal at Charlotte, NC.

d. Another factor that must be considered is the opening of the Panama Canal to larger ships, which may change the patterns of shipping to and from the United States. The effect on the whole Crescent Corridor needs to be analyzed as a contingency in the feasibility study.

**7. Underlying strategy and assumptions for the corridor**

a. Design criteria for the rail system will follow in so far as possible, or exceed in performance, the guidelines of the Steel Interstate System. Those guidelines include provisions for multiple tracks, frequent crossovers, additional passing tracks, elimination of grade crossings, higher speeds, automatic train control, and, if economically justified, electrification.

b. Highway design follows practices of the state DOTs' implementation of AASHTO standards.

c. Highway improvements are financed by present practice for financing new or improved highways, with priority given within established investment timelines over all existing programmed work other than bridge repairs. Work on enhanced grade crossing mini-barriers and/or signaling as well as grade separations structures will be financed out of

the highway trust fund.

d. Rail improvements are financed primarily by private investment, except for passenger rail and other participation by the government typical of past funding. It is intended that the rail system be privately owned and a for-profit entity.

e. Maximum efforts within economics will be made to seek the lowest cost solution with maximum payoff in terms of lowering environmental impact, increasing permanent economic development benefits, and increasing the safety and health of the public.

f. The Valley Corridor improvements would be done over a period that would be phased according to the availability of capital.

g. Fast Corridor rail will attract utilization by logistics and trucking companies that are within 2-3 hours driving distance of an intermodal terminal. That makes the band of economic influence along the corridor approximately 300 miles wide. Since this is an assumption, the market survey work of the study should determine the width of the band of interest of businesses and logistics companies in access the Valley Corridor.

## Analysis of market and need

8. **Surveys of traffic** - Traffic surveys need to be done at the beginning of the study by most participating states. The objective would be to describe more accurately than is now in the data bases the movement of trucks over the total distances involved in the Crescent Corridor, including the Valley Corridor, and all of its primary connections at the ends and at various key points along the backbone. Typical information should be collected on origin and destination, intermediate stops to load or unload, classification of equipment, characterization of freight, time of departure, expected arrival time. It is very important to document the place(s) of origin and destination within the corridor.

9. **Shippers' freight selection criteria needs to be revisited** - more data needed.

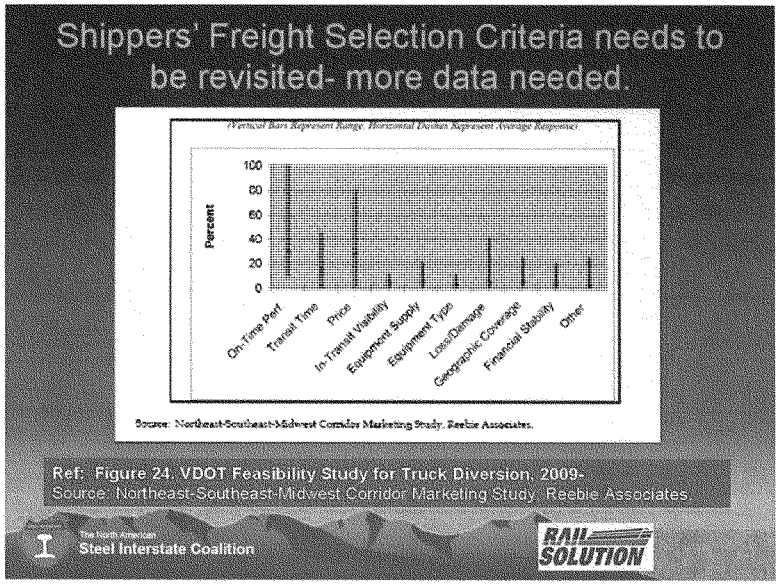


**Figure 4. Data from marketing study of Reebie Associates.**

a. Additional work needs to done to survey present and potential customers of intermodal rail freight to determine the importance of various characteristics of service to them. The chart shown here was done by Reebie Associates and had an earlier date for the data than 2009 (approx. 2003). Modern (Post-recession) data needs to be obtained, and the availability of open model solutions as well as distances of interest should be obtained.

b. The survey should include changes in routes in the future because of such factors as changes in imports, or ports of call or origin.

10. **The Valley Corridor as an important economic driver for the Appalachian Region**

a. More access to rail is needed in the region. Service to the region is tending to be lower in quality than other regions. In addition, passenger rail serving the Appalachian Region is almost non-existent,

both in real time and in plans.

b. Economic development of the region will be enhanced by the presence of fast, reliable rail service. It is already the location of numerous distribution facilities and manufacturers that depend mostly on trucking their freight.

c. The Valley Corridor runs through much of the region, with only a few counties in Virginia and Pennsylvania not being located within the corridor.

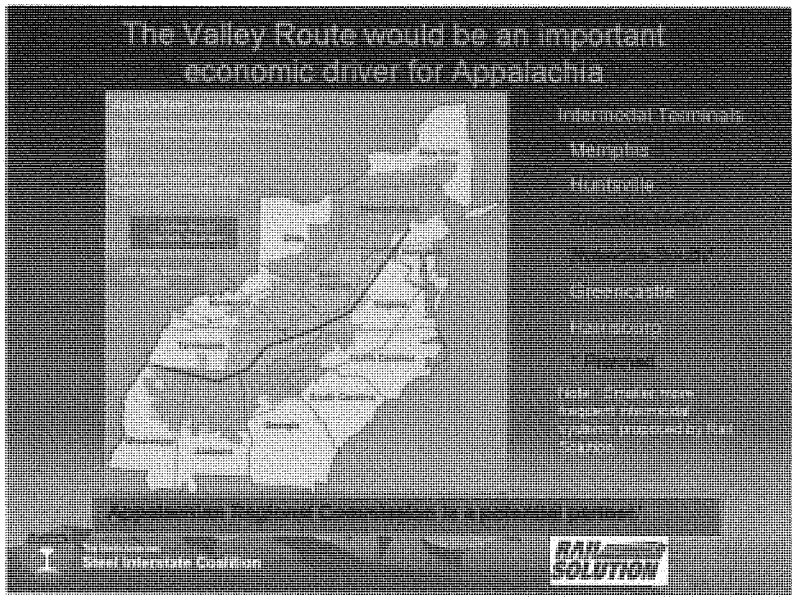


**Figure 5. Region classified as the Appalachian Region by the Appalachian Regional Commission with overlay of the Valley Route of Norfolk Southern.**

## Proposed technical evaluations or options

**11.** **Design speeds -** Norfolk Southern Valley Route would be redesigned for higher speeds, increased efficiency with general Steel Interstate criteria as the ultimate goal. The speeds (portal-to-portal) for the different primary

traffic classifications are:

a. Conventional freight (e.g.: bulk materials, tank cars, box cars, autos) - 60 mph.

b. Intermodal freight - 70 mph.

c. Passenger trains -90 mph.

**12. Open intermodal needs serious consideration**

a. Open intermodal system should be considered as an option so that regional, small terminal can make the Valley Corridor rail more accessible and increase significantly freight diverted to rail. If a large number of trains were leaving major end terminals, some could be made up to allow stop at intermediate locations. For example, shipments in containers of goods from China destined for the Walmart distribution center near Harrisonburg could be assembled into a regional train (at Rossville) that would be stopping to unload at Roanoke and Harrisonburg and Greencastle. For the container shipments, it might be necessary to mount it on a trailer at Rossville--depends on how the intermediate terminals are designed and what its handling equipment is.

b. The Modalohr system (Figure 6), or similar system, works for quick loading without cranes. While it has the down side of having to carry an articulated platform, it has the advantage of being able to accommodate multiple loading and unloading all at the same time. This is just an example of a new type of system that should be considered. It is certainly not mandated.

c. The feasibility study itself will need to determine if there is sufficient open intermodal traffic to justify special handling provisions and the additional terminals.

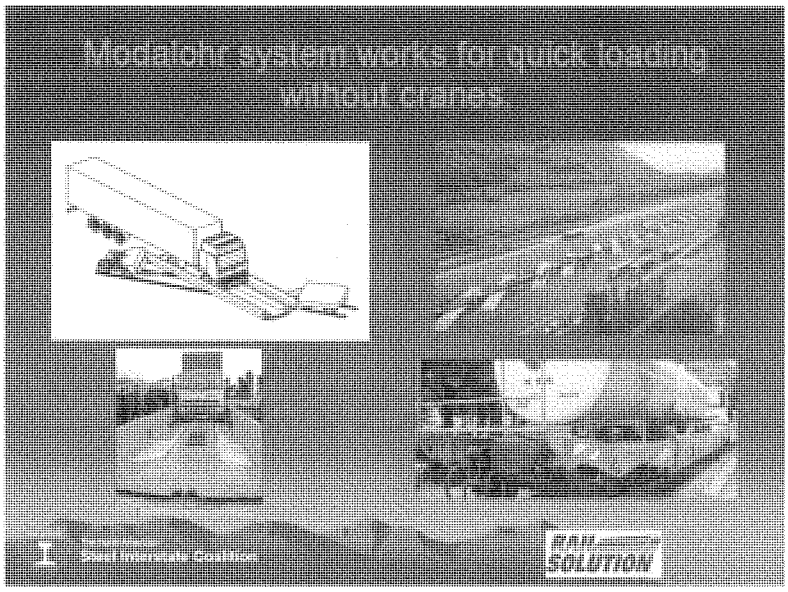


**Figure 6. Modalohr open intermodal system can carry trucks with or without trailers**

d. Other open intermodal systems - There are, of course, a number of open model systems that have been used or proposed. The most salient of these, especially the ones with which there is substantial experience should be analyzed for use on the Valley Corridor. The evaluation should objectively document why various designs or solutions were not chosen for the corridor.

e. Mid-point or en-route sorting by origin and destination pairs should be possible with the open modal systems with less than an hour of delay. This sorting will allow for the enhanced volume that is contemplated to be leveraged to provide solid block service to around four times (4x) the terminals currently proposed for the corridor. The goal would be for each terminal to originate an average of 100 trailers a day to multiple destinations. Since many more terminals are contemplated the overall highway drayage length, time, and financial cost decrease will be studied to determine the most efficient points of operation.

**13. Freight service within the region**

a. Evaluation of the cost and operations associated with more intermediate terminals should be performed.

b. Figure 7 includes the most plausible locations for terminals. The traffic expected for each of the terminals would be the most determinant of the feasibility of each terminal.

c. Intermediate terminals are envisioned as having a small footprint compared to regional terminals. Operation of the intermediate terminals by logistics companies is a possibility. Terminals on as little as 10 acres performing in an equivalent manner to "drop-lots" are envisioned near major activity centers.

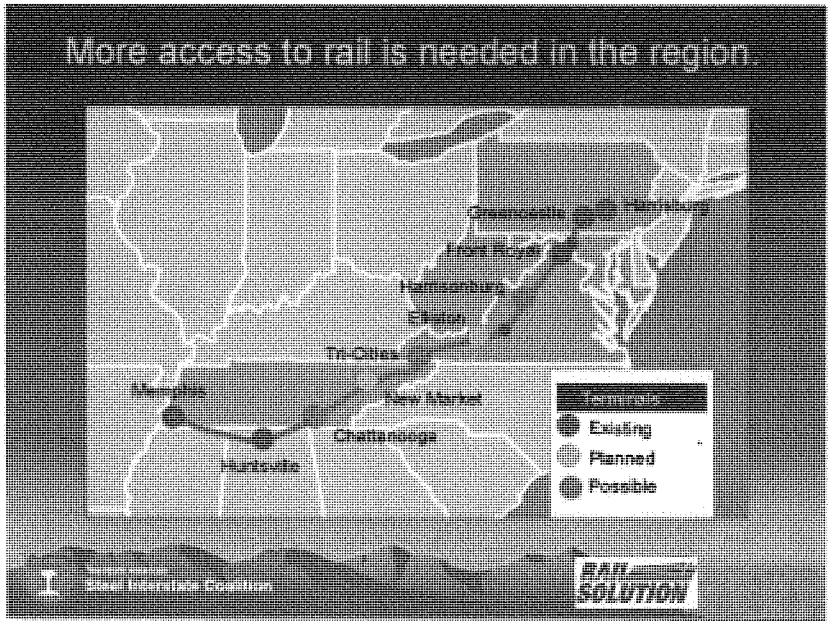


**Figure 7. Proposed terminal layout on the Valley Corridor**

**14. Operating characteristics with various classes of traffic**

a. Perform operations research with projected mixes of traffic over the system, so that a range of conditions can be accommodated by the design.

b. Determine incremental cost for passenger class of traffic as well as other classes.

**15. Alignment improvements** - Define specific types and exact locations and design of alignment improvements. Some typical improvements, with examples of locations.

a. Double tracking, such as use of existing right of way where double tracks previously existed.- example: NS Valley Route near Knoxville, TN

b. Change alignment to larger radius curves, eliminating smaller radius curves that limit speed. Example, speed Limits on the Valley Route near Buchanan, VA

c. Bridges need to be realigned and rebuilt for double track. Condition of NS Valley Route near Natural Bridge Station, VA

d. Some bridges may be required to eliminate traffic congestions. Example: CSX and NS using same bridges in Alabama.

e. Provide passing sidings to facilitate operations at terminals and stations.

f. Define crossover locations.

g. Straighten out S curves sections using cuts and tunnels as necessary.

h. Some areas may need the Magnolia Cut off solution.

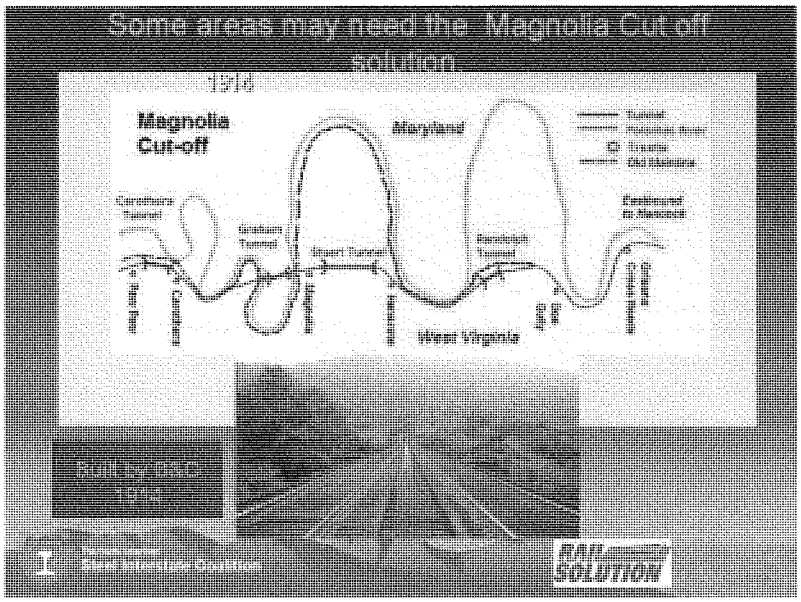


**Figure 8. Magnolia Cut-off solution of B & O in 1914**

i. Trenches or berms may be necessary in some towns and urban areas for noise abatement and for incorporating road crossings. The study must decide the locations of such berms and their use.

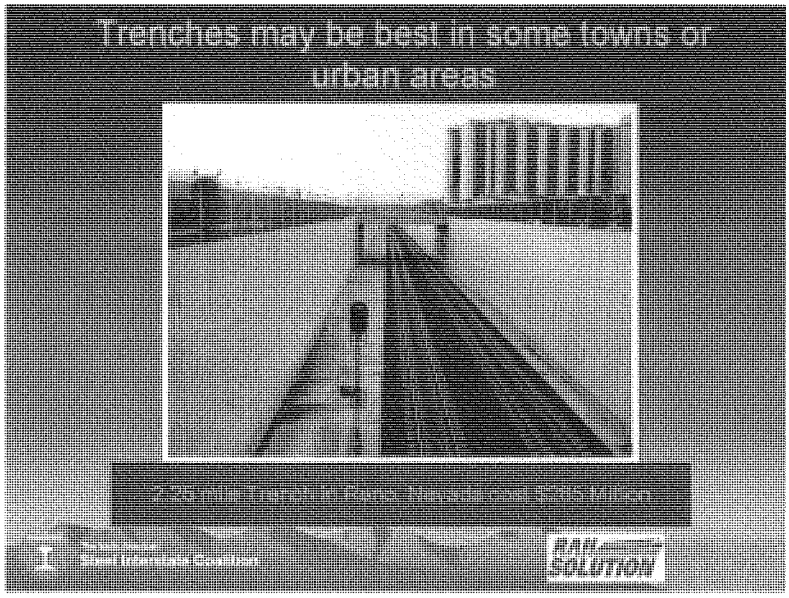


**Figure 9. Trench in Reno, Nevada**

j. To reduce noise and grade crossings, some realignments through towns would be the best alternative. The locations and alignment of such alternatives should be defined by the study.

**Figure 10. Possible realignment at Abingdon, VA**

k. Bypass some sections of NS Valley route by using Interstate Highway right of way. Some areas might be amenable to relocating main tracks to the interstate median, such as the I-81 section in East Tennessee.

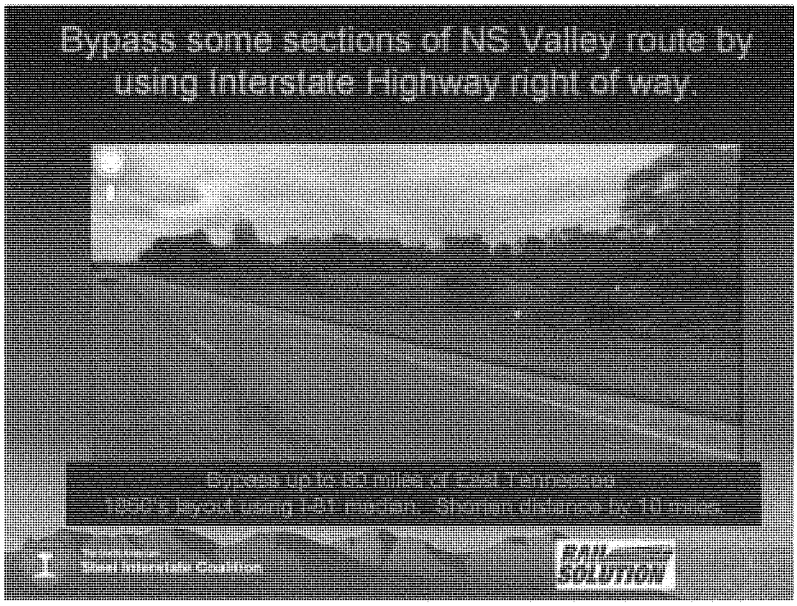


**Figure 11. Possible use of interstate highway median in Tennessee**

l. Elimination of at-grade rail crossings, such as the at grade level crossing of main line tracks of CSX and NS in Knoxville, TN.

m. Elimination of grade crossings with roadways- this is a huge task, requiring significant levels of coordination with local communities to eliminate crossings. Savings from avoided accidents and traffic delays at grade crossings would be incorporated among benefits of this investment.

**16. Definition of interstate highway improvement**

a. Rely on previous or parallel studies, such as VDOT analysis of Roanoke

Valley and Wythe Co., VA, Tier 2, EIS improvement segments. The feasibility study should evaluate options for additional lanes, distinguishing requirements for trucks and other vehicles.

b. Define the connections to proposed regional freight terminals.

c. Provide analysis of set of interstate construction options matching truck freight diversion quantities for various scenarios.

**17. Definition of options for passenger rail** - analyze provisions for passenger rail with financing options.

a. Perform market surveys and analyses for passenger rail options, including such routes as Washington to Roanoke, Bristol, Knoxville, Atlanta; Knoxville to Atlanta. Segments that should be evaluated are those less than 500 miles total. The primary targets are distances averaging 300 miles or less.

b. Determine potential stations and locations.

c. Analysis of fit of passenger rail with freight rail requirements.

d. Cost basis for passenger rail- payments to Norfolk Southern.

e. Estimates of incremental cost (capital and operating costs) for passenger rail must be separately accounted for and stated in results of the study.

f. Evaluate the creation of an FDIC type insurance pool for passenger operations with first dollar coverage (e.g. from $10k to $100k options) for liability protection. Full indemnification beyond that first dollar payout. Program charge of around $0.006/PSGM collected with ticket billing, a 5% overhead limit would be set in the statue. Open for any ground common carrier (rail or road) operator using terminals at the endpoints, with a rating factor applied to premiums. This concept would fully protect shareholders if the operator was to be the host railroad.

## Products of the Valley Corridor Feasibility Study

**18. Products of the Valley Corridor Feasibility Study**

a. Layout design and estimate of costs and impacts of rail and highway components

b. Logical best solutions (best cost: benefit) for a mixture of modes of transportation

c. Select most workable and best solution (or solutions)

d. Economic development impacts of selected best solution (or solutions)

e. Methods of financing components of the selected solution (or

solutions)

f. Economic development impacts of selected best solution (or solutions).

**19. Questions regarding divertible truck freight to be addressed by the feasibility study**

a. How much divertible truck freight is there on the corridor, considering:

1) Rail system performance- speed, reliability, cost
2) Desires of the potential users- logistics firms, trucking companies, freight companies.
3) Attributes of routes/corridors with high diversion rates on presently existing systems (i.e.: Why are the diversion rates high?)
4) Open intermodal vs. container/dry van only or only containers.
5) Distribution of terminals and use of intermediate terminals that are not so far apart. (distance and location to be determined by projected business.)
6) Fuel cost and taxes on fuel
7) Regional economic development
8) Attracting traffic more distant from backbone.
9) Effect of more efficient and cheaper fuel for trucks (e.g. Natural Gas) and for railroad engines.
10) Electrification.

b. How is the truck freight diversion allocated to various segments of the Valley Corridor?

**20. Products of the study regarding rail system layout**

a. Operating characteristics of rail system.
b. All traffic volumes.
c. Operational characteristics with higher speeds and different speeds of the various classes of traffic.
d. Track layout requirements (number of tracks and frequency, grade separation, curvature, super-elevation, etc.).
e. Alternative layouts (around some towns, channels through, use of interstate highway right of way).
f. Additional freight terminals, passenger terminals.
g. Rolling stock, engines, etc.
h. The alternative motive power over the Valley Route, including both

conversion to natural gas and electrification.

i. Phasing of the buildup to ultimate capability. Define logical steps for phasing the buildup, with analysis of market capture and costs.

**21. Products of the feasibility study related to the highways**

a. Requirements for highways to handle freight volumes as function of rail utilization.

b. Definition and estimates for connectors to rail terminals.

c. Additional lanes for truck traffic.

d. Additional lanes because of auto traffic increase.

**22. Costs and benefits analysis**

a. Cost and benefits of principal scenarios of rail market penetration for period 2015-2040 (a 25 year period from possible implementation date for the project.)

b. Rail costs.

c. Highway costs.

d. Benefits of total solution for each scenario in terms of costs total and costs to various sectors (railroad industry, various governments, the public) and the costs and benefits for safety, environmental impact, and economic development of the Valley Corridor region.

**23. Products of the feasibility study regarding financing**

a. Financing of the multi-modal corridor.

b. Private financing of rail.

c. Government pays for public benefits with rail.

d. Government guaranteed loans for rail.

e. Highway- government financed as usual.

f. Allocation of costs to various sectors.

g. Capital requirements and sources (see next section).

h. Analysis of basis for subsidies based on Federal practice - Perform five decade analysis of Interstate Highway System User Costs and Revenue. Compute full cost recovery using various market interest rates and a capital cost ratio for commercial vehicles varying from (2.0 to 5.0). This calculation would be used to set a historic floor for user non-revenue (subsidy) to finance the system. In conjunction with forward looking projections it could be used to compare alternatives to very small highway segment projects.

**24. Creative work required for financing, including revenues for public sector contributions**

a. Some examples - some require legislation:

1) Repatriation of overseas profits with tax reduction for investments in rail.
2) Loan repayments based on revenue of the route where investment made improvements.
3) Highway funds to be used for grade separation, rerouting of rail lines to eliminate highway problems, and provide access to terminals.
4) Highway funds used for highway improvements.
5) Dedication of government owned rights-of-way to rail.
6) Financing of passenger rail improvements and operations.
7) Whenever it might be feasible to electrify, obtain installation capitalization by the power companies.
8) Tax abatements.
9) Tax applied to imports (allowed for negative balance of payments.
10) Full recovery from the trucking industry their proportional expense of building and maintaining highways.

**25. Schedule and level of effort for Valley Route Feasibility Study**

a. Study period - two to three years total, including organization time.
b. Cost on the order of $5 Million, not counting the effort of Norfolk Southern Railroad effort to supply design input and review.
c. Source of funds
    1) Federal Funds for projects of regional significance that can reduce freight transportation congestion and cost (MAP-21).
    2) There may be other sources.
d. The Knoxville Regional TPO is qualified to manage funds. Funds would come to TDOT.
e. Probable need to have a percentage of state participation (perhaps 20 percent). (Can NS effort be counted in order to decrease contribution of states?)

**26. Next steps to make a proposal to the Federal Government**

a. Must have consent of Norfolk Southern to move ahead with any steps
b. Must get another state (or more) to agree to participate.
c. Advise TN Commissioner that NS and another state are ready to discuss going forth with the Feasibility Study.
d. Knox Regional TPO meets with Federal DOT for proposal ground rules.
e. Recruit members, organize the MPO-TPO consortium.

f. Recruit Associate members (RPOs, other governmental groups).
g. Obtain pledges of funding and participation.
h. Knox Regional TPO prepares proposal.
i. Submit proposal to Federal Government.

# Congress of the United States
Washington, DC 20515

**Joint Written Testimony of**
**Rep. Judy Chu, Rep. Grace Napolitano, and Rep. Adam Schiff**
**Before the House Committee on Transportation and Infrastructure Special Panel on 21st Century Freight Transportation**

**Wednesday, April 24, 2013**

Chairman Duncan, Ranking Member Nadler, and Members of the Special Panel on 21st Century Freight Transportation, we thank you for holding this important hearing and giving us an opportunity to submit testimony for the record.

We have represented the San Gabriel Valley area of Los Angeles County, California for many years and have been strong advocates for investment in transportation infrastructure throughout our region. We applaud your commitment to our Nation's freight transportation system and your recognition of the urgent need to significantly upgrade our freight-related infrastructure.

International trade and domestic goods movement are vital to the economic health of Southern California and our entire Nation. The San Pedro Bay ports handle almost half of our nation's shipping containers, approximately three-quarters of which are destined for markets outside the Southern California region. As a result, regional freeways are heavily traveled by trucks and up to 100 freight trains a day traverse the region, with more than 90% of this freight rail traffic heading east. Absent significant investment in improvements to the region's goods movement system, freight traffic chokepoints will continue to impose significant economic and environmental costs on the nation and our neighborhoods—a condition which may be exacerbated when trade volumes pick up as our economy recovers.

One example of our area's efforts to mitigate this impact on our communities was the opening 11 years ago of the Alameda Corridor, a 20-mile, grade-separated freight rail expressway. When Congress deliberated the reauthorization of Federal transportation programs after ratification of the North American Free Trade Agreement (NAFTA), proponents of the ACE Program argued that it would be shortsighted and unwise to foster development of the Alameda Corridor while failing to address the impact of the heightened freight rail traffic beyond the Corridor's terminus in downtown Los Angeles.

While the Alameda Corridor resolved a key bottleneck between the ports of Los Angeles and Long Beach and the transcontinental rail yards east of downtown Los Angeles, it has not addressed the freight rail traffic nearly all of which continues to the east, crossing urbanized areas in Los Angeles, Orange, San Bernardino and Riverside counties.

The Alameda Corridor-East Construction Authority (ACE) is a single purpose construction authority that was exclusively charged with mitigating the impacts of the significant increases in freight rail traffic along 70 miles of mainline railroad in the San

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Gabriel Valley in Los Angeles County. The Alameda Corridor-East - Gateway to America Project (ACE Program) was initiated to relieve traffic congestion in the Valley caused by longer and more frequent freight trains, as well as to address important safety and environmental concerns. Studies have shown that without the ACE Program, traffic delays at rail/highway crossings in the Valley would increase by 300%.

Our area is also part of the worst air basin in the nation, we must encourage infrastructure improvements such as those proposed by the ACE Program to minimize the emission of air pollutants by heavy diesel trains and trucks.

To address the impact of freight rail to the east, Congress allocated significant federal dollars to the ACE Program and designation as a National High Priority Corridor in the Transportation Equity Act for the 21st Century (TEA-21). This investment allowed for an initial round of important rail-highway crossing improvements in the San Gabriel Valley, sparked a major commitment of resources by the State of California and the Los Angeles County Metropolitan Transportation Authority (MTA), and ultimately set the stage for another major Federal investment and a designation as a Project of National and Regional Significance in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU).

With this mix of discretionary and directed Federal, State and local funding, ACE has developed and implemented a comprehensive corridor improvement program over the last 14 years that addresses both existing and anticipated safety and mobility issues at a total of 39 rail-highway crossings in the heart of Southern California's nationally significant goods movement network. Moreover, ACE's great success in completing these projects has encouraged similar rail-highway crossing improvement efforts in our neighboring counties to the south and east. While Federal funding was the indispensable catalyst for the ACE Program, the overall Federal share of the Program since its inception is only 20%.

We are proud of ACE's many accomplishments and are quite appreciative of the Federal role thus far in the establishment of this critical program. However, the program is not yet complete and the impact of goods movement will only continue to grow. Train traffic in our region is expected to increase by 160% by the year 2020 causing greater strain on the quality of life and the environmental impact of increased congestion. We must continue to mitigate the impacts of train through our local communities and the timely movement of goods through the corridor remains in the national economic interest. That is why we believe the long-overdue national freight program could be a critical component of ensuring projects like ACE around the country could be completed, protecting lives and the environment, while speeding up the transportation of goods from the ports to the rest of the country.

As this panel considers the evolving National Freight Plan, we urge you to address impacts of ever increasing freight rail and highway goods movement traffic on adjacent communities.

As you develop freight transportation-related recommendations for the Transportation and Infrastructure Committee, we respectfully request that you prioritize:

1. The urgent need for investment in goods movement infrastructure which carries much of the nation's trade, such as those in Southern California;
2. Infrastructure investments that reduce and mitigate the safety, mobility and environmental impacts of goods movement on communities like those in the San Gabriel Valley;
3. Provision of dedicated funding for such freight investment and mitigation projects which are of regional and national significance; and
4. Specific infrastructure investments in such communities where nationally and regionally significant freight rail lines and goods movement highway corridors/arterials intersect in at-grade crossings.

We sincerely appreciate your giving us an opportunity to express our views on this important subject. We look forward to working with you to both develop these recommendations and make them a reality.

Sincerely,

| | | |
|---|---|---|
| JUDY CHU<br>Member of Congress | GRACE NAPOLITANO<br>Member of Congress | ADAM SCHIFF<br>Member of Congress |

Testimony of Kurt J. Nagle
President and CEO
American Association of Port Authorities

Before the
U.S. House Committee on Transportation and Infrastructure
Panel on 21st Century Freight Transportation

Hearing:
"Overview of the United States' Freight Transportation System"
April 24, 2013

Thank you for the opportunity to submit this written testimony for the record. Founded in 1912, the American Association of Port Authorities (AAPA) is an alliance of the leading public ports in the Western Hemisphere. Our testimony today reflects the views of our U.S. members.

Seaports have played a key role in America's intermodal freight movement system since the founding of the United States. Seaports have served as a vital economic lifeline for America by bringing goods and services to people, creating economic activity, and enhancing our overall quality of life.

In these challenging economic times, when cutting spending and reducing the deficit are at the top of Washington's agenda, the government must make smart choices with tax dollars. By bolstering the connections that American farmers, manufacturers, and consumers have with the world marketplace, we can create a stronger economy with increased job creation, reduced costs to Americans for vital goods, and increased tax revenue.

More than a quarter of the U.S. Gross Domestic Product is accounted for by international trade. Freight movement through America's seaports supports the employment of 13.3 million American workers, and seaport-related jobs account for $649 billion in annual personal income. For every $1 billion in exports shipped through seaports, 15,000 jobs are created.

Our country's economic prosperity depends on a robust and sound transportation infrastructure not only inside port gates but also a freight movement infrastructure that efficiently brings goods to and from the ports.

To accommodate increasing trade volumes, there must be adequate, safe, and congestion-free access to our ports from both the land and water-sides. Under-investing in these connections with ports will drastically impact our country's ability to compete internationally and meet U.S. demands.

Unfortunately, in recent years the federal government has prioritized neither maintaining nor enhancing port-related infrastructure projects. On January 15, the American Society of Civil Engineers (ASCE) released a report on the impacts of under-investing in America's infrastructure. The marine ports and inland waterways section shows that an additional $15.8 billion investment per year through 2020 will protect nearly $700 billion in U.S. GDP, $270 billion in U.S. exports, 738,000 jobs, and $770 per year in household costs. Overall, ASCE projects America could see as much as a $4 trillion loss to its GDP by 2040 if we ignore U.S. transportation infrastructure needs.

The report notes that land and water connections that affect the ports' ability to move cargo into and out of the country are often insufficient and outdated. The resulting congestion and delays cause the goods we import to become more expensive, and the goods we export overseas to be less competitive in world markets. Because international trade is central to our economic well-being and seaports connect us with the rest of the world, keeping them modern, navigable, secure, and properly supported are core priorities for AAPA – and they must be for the nation as well.

Today, as we confront a host of international challenges we must realize that the continuing vitality of not only our seaports but also our entire intermodal supply-chain system is of critical importance.

In efforts to streamline government and reduce the deficit, it is crucial to recognize that not every federal dollar spent is the same. Federal investments in the freight-movement infrastructure that connects American industry to international markets is an essential, effective utilization of limited federal resources. They pay enormous dividends through increased international competitiveness, long-term American job creation, U.S. economic prosperity, and over $200 billion in federal, state, and local tax revenues.

Here are some of AAPA's top transportation priorities. We hope that this panel takes them into consideration when drafting its final report to the Committee and throughout its fact-finding process.

Support of a National Freight Policy:

AAPA supports the Department of Transportation (USDOT) developing and implementing a National Freight Policy pursuant to MAP-21. Because freight mobility is essential to securing and strengthening the national supply-chain, a National Freight Policy should prioritize support for regional, state, and national freight networks, as well as inter-modal connections to seaports.

AAPA continues to advocate for federal funding specifically for freight projects of national and regional significance. AAPA is pleased that USDOT is creating a freight advisory committee. This committee should include a variety of port representatives. AAPA is further heartened that the Department of Commerce continues to coordinate working groups focused on supply-chain efficiencies. Creating frameworks that prioritize freight mobility within a strong national supply-chain are vital to greater job creation and a more robust economy.

Freight mobility is important to the national economy, and therefore Metropolitan Planning Organizations should not only be tasked with taking freight mobility into account when they create regional transportation plans. They should also be provided additional funds for expert staff positions dedicated to freight issues. AAPA supports the Secretary of Transportation creating a multi-modal freight office. Freight mobility

should be a key priority within USDOT. A multi-modal freight office, staffed by experts with freight experience should be established within the Secretary's office. The purpose of this new freight office, among other things, could focus on nationally and regionally significant infrastructure, and work with state and local Metropolitan Planning Organizations and other stakeholders.

TIGER Grant Funding:

AAPA has supported the Transportation Investment Generating Economic Recovery (TIGER) program begun under the American Reinvestment and Recovery Act and continued through appropriations to provide discretionary grants utilizing U.S. general treasury funds for port infrastructure projects. TIGER is the only general federal funding source for port-related infrastructure, which is critical to U.S. exports and the competitiveness of the U.S. economy. AAPA supports funding for TIGER in the budget.

AAPA continues to advocate for the continuation of TIGER grants as well as for dedicating 25 percent of the available funds to port-related infrastructure projects. AAPA supports continued funding of the TIGER grant program at the level of $500 million.

Full use of the Harbor Maintenance Tax

AAPA believes a permanent solution to the HMT spending issue is needed. AAPA urges Congress to pass legislation that guarantees full utilization of the annual revenues of the Harbor Maintenance Tax, such as providing an offset to collections or causing the use of collected revenues to be mandatory. HMT funds should be first used for historical intended purposes, and we support providing more equity for HMT donors.

While the President's recent budget proposal did not call for full use of the HMT, a provision of MAP-21, as passed by Congress, did. Until mandatory full HMT use is achieved, AAPA strongly urges Congress to continue to increase the funding level for

maintenance dredging to address the growing backlog of maintenance projects and bring channels back to their constructed depths and widths.

Investing in Freight Rail:

Making the freight rail system safer and more efficient, improving environmental sustainability, and encouraging competitive rail access to ports are critical steps to maintaining a robust economy. Federal surface transportation programs should provide tax credit incentives for main line and short line railroads to invest in port access; create a grant program with cost-share (federal/railroad) for projects with both public and private benefits; increase the efficiency of loan guarantee programs such as Railroad Rehabilitation and Improvement Financing (RRIF); define freight corridors of national significance that would be eligible for rail investment; and increase expertise in state departments of transportation and Metropolitan Planning Organizations on rail access issues.

Marine Highways:

AAPA supports the development of marine highways that alleviate highway congestion and improve environmental sustainability through a greater utilization of current federal programs such as the Congestion Mitigation and the Air Quality (CMAQ) Improvement Program to fund projects for short sea shipping services; incentives for shippers (e.g., green tax credit); and development of expertise on marine highway alternatives and benefits at the state and Metropolitan Planning Organizations level.

Improving Project Funding and Delivery:

AAPA supports addressing environmental review inefficiencies and National Environmental Policy (NEPA) redundancies that cause project delays and cost overruns. Duplicative environmental reviews can be eliminated by giving NEPA responsibilities to

appropriate state agencies. AAPA advocates for Public-Private Partnerships (PPP) where each sector pays in proportion to the benefits they derive from the capacity generated by the infrastructure.

Alternative Financing Mechanisms:

AAPA supports alternative financing mechanisms like national and state infrastructure banks, the Transportation Infrastructure Finance and Innovation Act (TIFIA) program, and government bond financing. These mechanisms should specifically include port authorities as eligible applicants, include port-related infrastructure as eligible for funding, and not specify a minimum project cost that prevents reasonable port projects from being eligible.

At AAPA, we're hopeful that the federal government's current efforts at implementing provisions of 2012's MAP-21 transportation bill and the creation of its reauthorization will result in a coherent and effective national freight policy and strategy. Such a national strategy and the necessary federal investment to support it will ensure that American-made products are more competitive around the globe, American manufacturers and consumers pay lower prices for the goods that they need, and American jobs are sustained and created here at home.

AAPA commends Committee Chairman Shuster and Ranking Member Rahall for the creation of this panel, and we are heartened by the seriousness with which Panel Chairman Duncan and Ranking Member Nadler are treating this issue. It is critical, as you well know, that Congress recognize the need for federal investments in every mode of transportation within America's entire freight movement network.

Thank you again for the opportunity to include this testimony as part of this hearing's written record.



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