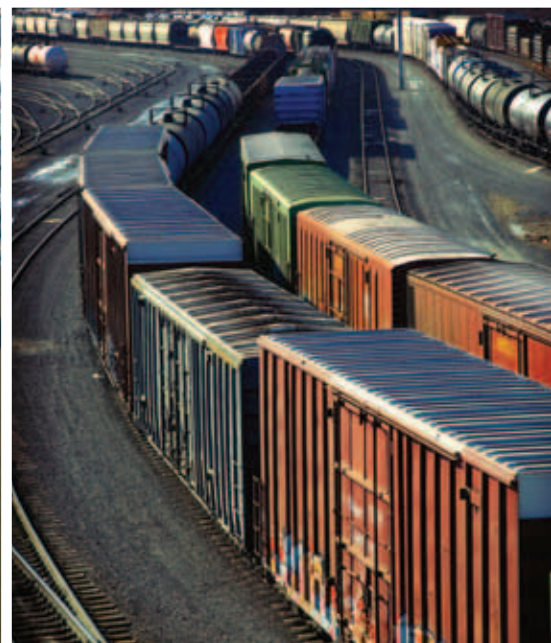


Transportation Reboot:

Restarting America's Most Essential Operating System

The Case for Capacity: To Unlock Gridlock, Generate Jobs, Deliver Freight, and Connect Communities



Unlocking Freight

<http://ExpandingCapacity.transportation.org>

PART **2** OF A SERIES

Acknowledgements

Much of the freight-specific information and analysis contained in this report was drawn from the forthcoming AASHTO *Freight Transportation Bottom Line* reports. These reports were commissioned by the AASHTO Special Committee on Intermodal Transportation and Economic Expansion, the Standing Committees on Rail and Water Transportation and the Subcommittee on Highway Transport, and prepared by Cambridge Systematics, Inc. The principal investigator for these reports is Lance Grenzeback for whom we offer special thanks for his assistance in updating information and forecasts for this report.

Other material cited in this report, including the estimates of capacity increases required, is drawn from research published in May 2007 by the Transportation Research Board's National Cooperative Highway Research Program (NCHRP). The report, *Future Options for the Interstate and Defense Highway System*, can be accessed at http://onlinepubs.trb.org/onlinepubs/trbnet/acl/NCHRP_20-24_52Task10_NCHRPFinal.pdf

The objective of the research project was to develop a potential vision for the future of the U.S. Interstate Highway System. The report was prepared by a study team led by David Gehr and Steve Lockwood of PB Consult, Gary Maring of Cambridge Systematics, Inc., Kevin E. Heanue and Alan E. Pisarski.

The analysis period considered in the Future Options Report was the 30 years from 2005 to 2035. In order for this report to be comparable to that of the National Surface Transportation Policy and Revenue Study Commission's report, *Transportation for Tomorrow*, AASHTO based its findings on the research conducted by PB, Cambridge Systematics, Pisarski and Heanue, but presented its recommendations using the 2050 time horizon. We have also updated the travel demand forecasts using more recent data from AASHTO's 2009 Bottom Line Report. The report also benefitted from the work Michael Gallis and Associates contributed to AASHTO's 2007 publication, *A New Vision for the 21st Century*.

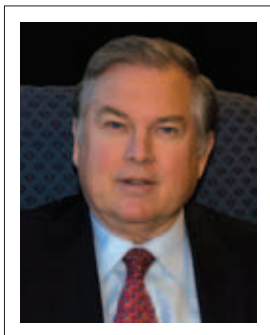
**Find Your State Examples of Freight Capacity Needs at
<http://ExpandingCapacity.transportation.org>**

Whether it's a traffic-choked interchange or a truck-only lane needed to accommodate increasing amounts of freight movement, states have a long and urgent list of capacity improvement projects. In response to an AASHTO survey, state departments of transportation have identified some of their high priority needs. Full details on these projects are available at <http://ExpandingCapacity.transportation.org>.

Foreword

AASHTO Executive Director

John Horsley



John Horsley
Executive Director

Consensus is growing among Congressional leadership—especially House Transportation and Infrastructure Committee Chairman James Oberstar and Senate Environment and Public Works Committee Chairwoman Barbara Boxer—that “freight” should be a priority in the next Surface Transportation authorization. Two reasons for this new emphasis stand out: the growing recognition that an efficient freight system is important to a strong economy and jobs here at home, and that a vibrant and integrated freight system is a basic ingredient in keeping America competitive abroad.

Based on AASHTO’s analysis contained in this report, it is clear that the U.S. freight system is not keeping up with the demands being made on it. The collapse of the economy in late 2008 temporarily reduced the volumes of freight moving through our seaports, and reduced related truck and rail freight activity. The time it takes for the economy to recover will give the freight system a breather before capacity deficiencies again constrain U.S. economic growth and productivity. During the interim, we must move aggressively to determine the system improvements needed and use this information to develop a strategic national freight plan that will take us there.

We have prepared this report to describe how important an efficient freight system is to the economy, the congestion already taking place, the growth in anticipated demand, and the challenge of keeping America competitive in the world economy.

The country has a lot at stake. It is critically important for our national leaders to address the challenges ahead and to fund the freight system capacity we need.

“The next time you are on a highway or city street, look around you. Notice the number of trucks, semis, and other cargo vehicles. Now imagine in 20 years: For every two trucks you see on the road today, there will be an additional one right behind it, carrying the expected growth in food deliveries, goods, and manufacturing equipment. If we don’t add more capacity, those additional trucks will be right next to you on the roadway, adding to congestion and delays. Is that a future you want to experience?”

—John Horsley, AASHTO
Executive Director

Unlocking Freight

Key Findings



The transportation system that supports the movement of freight across America is facing a crisis. Our highways, railroads, ports, waterways, and airports require investment well beyond current levels to maintain—much less improve—their performance. Millions of jobs and our nation's long-term economic health are at risk.

The need to move significantly more freight across the country and the world will increase substantially in the 21st century.

- The U.S. population reached 308 million in 2010, and is expected to reach 420 million by 2050. A larger population will consume more food, clothing, and other commodities.
- By 2020, the U.S. trucking industry will move three billion more tons of freight than we haul today. To meet this demand, the industry will put another 1.8 million trucks on the road.
- In 20 years, for every two trucks now on the road, there will be an additional one right behind it, carrying the expected growth in food deliveries, goods, and manufacturing equipment.
- In 40 years, overall freight demand will double, from 15 billion tons today to 30 billion tons by 2050. Freight carried by trucks will increase 41 percent; by rail 38 percent from today's quantities. The number of trucks on the road compared to today will also double.

Freight Movement—From the Wheat Field to the Breakfast Table



- By 2015, the widening of the Panama Canal may shift significant volumes of goods from West Coast ports to Gulf ports and ports on the Atlantic Coast. These ports may not be deep enough for larger vessels or may not have adequate road or rail capacity to meet the new international trade demands.
- U.S. exports will grow at a rate of 5.8 percent annually, outpacing imports which are expected to increase annually by 4.2 percent.



The current capacity of our nation's roads, rails, and seaports is not keeping pace with demand.

- Between 1980 and 2006, traffic on the Interstate Highway System increased by 150 percent, while Interstate capacity increased by only 15 percent.
- On average, 10,500 trucks a day travel some segments of the Interstate Highway System. By 2035, this will increase to 22,700 trucks for these portions of the Interstate, with the most heavily used segments seeing upwards of 50,000 trucks a day.

- The amount of traffic experiencing congested conditions at peak hours in the nation's most urban areas on the Interstate System doubled from 32 percent to over 67 percent.
- Nineteen states see the heaviest use; 88 percent of all these truck miles are centered around just six states—California, Arkansas, Georgia, Tennessee, Texas and Pennsylvania.
- Major highway bottlenecks at urban Interstate interchanges cause tens of thousands of hours of delay each day, week, and year for truckers, business travelers, and commuters. Strings of bottlenecks are emerging along regional and transcontinental freight routes, creating corridors of congestion instead of corridors of commerce.
- Estimates of the truck hours of delay for the worst freight-truck bottlenecks show that each of the top 10 highway interchange bottlenecks cause over a million truck-hours of delay per year, costing \$19 billion overall.
- More than half of the 240 locks funded by the US Army Corps of Engineers are more than 50 years old and have exceeded their economic design lives.

The nation's freight transportation system directly affects economic development, current and future jobs, and the quality of life in our communities.

- More than 10 million people work in jobs in the freight transportation industry, from couriers, truckers, laborers, shippers, railroad conductors and mechanics to postal carriers, warehouse operators and stock clerks.
- Delays and idling trucks at bottlenecks and chokepoints exacerbate negative air quality impacts on the surrounding communities.
- At-grade rail crossings in cities and towns disrupt daily commerce, create tie-ups and delays.

Greater investment, better planning and more highway and rail capacity are needed to address these problems.

■ **Expand the capacity of the Interstate Highway System.**

- Add 32,000 lane-miles to the current Interstate system.¹
- Upgrade 14,000 lane-miles of the current National Highway System to Interstate standards.
- Add 14,000 lane-miles to NAFTA corridors.
- Add 8,000 lane-miles of truck-only toll facilities.
- Add 400 lane-miles to provide access to key port and intermodal facilities

■ **Create and fund a national freight program that could include multi-state freight corridor organizations at the state, regional, and multi-state level.**

- Develop a National Multimodal Strategic Freight Plan.
- Apportion approximately \$3 billion annually of a proposed \$375 billion highway program to the states for freight investment from the Highway Trust Fund, and add another \$7 billion annually through freight fees outside the Highway Trust Fund.

■ **Invest in Intermodal Connector Improvements.**

- Ensure funding eligibility for intermodal connectors—usually local roads in older industrial and residential neighborhoods used by truckers to travel between major highways and the nation's ports, rail terminals, and air cargo hubs.
- Support increased collaboration between states and railroads on public-private partnerships and federal investment tax credits to finance growing needs on the freight rail network.



- Use the existing surplus from the federal Harbor Maintenance Trust Fund for critical seaport dredging projects. Additionally, direct the Federal Inland Waterway Trust Fund to complete needed lock and dam construction and maintenance projects.

*Photos courtesy of the America's Road Team,
American Trucking Associations*

**State examples of freight capacity needs are at
<http://expandingcapacity.transportation.org>**

¹ One lane-mile is one mile of one lane of a roadway; a one-mile length of a four-lane highway equals four lane miles.

INTRODUCTION

Facing America's Freight Capacity Crisis

“A thriving economy is built on good transportation. Some seem to think that the nation is now built for all time and that we can continue to prosper without expanding our transportation system. They are wrong. The simple fact is: No transportation, No economy. They are inseparable. We must invest to maintain and strengthen the American “Transconomy.”

*—AASHTO President Larry (Butch) Brown,
Executive Director, Mississippi Department of Transportation*

America faces a freight transportation capacity crisis. Our highways, railroads, ports, waterways, and airports require investment well beyond current levels to maintain—much less improve—their performance. All systems are aging and stretched to capacity. The collapse of the economy in late 2008 temporarily reduced demand at seaports, and reduced truck and rail freight volumes. The time it takes for the economy to recover will give highway, rail, and port systems a breather before the capacity of the freight system will again constrain U.S. economic growth. During this period, decision makers will need to find a way to fund the improvements needed to improve the national freight system.

Transportation and the Economy

Transportation is vital to the U.S. economy. A \$1.2 trillion industry, it generates eight percent of the nation's jobs and accounts for nine percent of the U.S. economy. More importantly, it provides the equipment and services that support all other industries, especially manufacturing, retail, services, agriculture, and natural resources, which together account for 84 percent of the U.S. economy.

The performance of the nation's freight transportation system directly affects:

- **Economic Development and Jobs**—Reliable freight transportation gives businesses a competitive advantage in the global economy by providing them with the ability to deliver products at lower cost while reaching larger markets. More than 10 million people work in jobs in the freight transportation industry, from couriers, truckers, laborers, shippers, railroad conductors and mechanics to postal carriers, warehouse operators and stock clerks.

“The nation's 116 million households, 7.7 million business establishments, and 89,500 government units are part of an enormous economy that demands the efficient movement of freight. While the U.S. economy has been affected by the recent global recession, it is expected to fully recover and continue to grow.”

*—Federal Highway
Administration 2009*

- **Standard of Living**—The freight transportation system delivers an immense range of food, clothing, tools, materials, and services to homes and businesses. Consumers enjoy an unprecedented variety and quality of products because producers are able to manufacture, trade, and distribute across local, national, and global markets.

This report addresses:

- The Growing Freight Demand
- Staying Competitive in the Global Economy
- Corridors of Congestion Instead of Corridors of Commerce
- What Needs to be Done to Keep Freight On the Move



Longshore workers preparing Caterpillar equipment for a heavy lift onto a ship for export.

*Kathleen Tomandl,
photo courtesy of the
Port of Tacoma.*

CHAPTER 1

Freight Demand in the United States Is Growing

Georgia—The Georgia Department of Transportation built a new interchange at I-85 to support a job-creating KIA Motors assembly plant in West Point, Georgia. A fast-tracked timeline and design-build contract were used to enable the state to open the project to traffic in only 17 months, one month ahead of schedule.

Rhode Island—The Rhode Island Department of Transportation initiated the Route 403 relocation project to provide direct highway access to a former Navy Base being reborn as the state's largest business and industrial park. The 3,000-acre Quonset Business Park was already home to 168 businesses employing 8,500 people. Plans to grow the park to 15,000 jobs depended on improved highway access. The new 4.5-mile four-lane, limited-access highway replaced a two-lane, rural state road. Successful completion of the new highway and an interchange with Route 4 will help attract new businesses, create jobs, and strengthen the state's economy.

What drives freight demand is economic growth. Once the United States recovers from the current downturn, the economy is expected to increase at 2.2 percent per year in the years ahead. Freight demand will double from 15 billion tons today to 30 billion tons by 2050, traveling on an already inadequate transportation system.

Ports-to-Plains Corridor, Colorado



Along the Ports-to-Plains corridor in **Colorado**, large truck traffic exceeds 50 percent of all traffic along US 40, US 287, and Interstate 70 between Oklahoma and Denver. Semi-truck traffic averages between 40 and 50 percent along many other sections. Improving this corridor for additional traffic would also provide a good alternative to the state's busiest and most congested corridor—I-25—while enhancing opportunities for economic and transportation development on Colorado's Eastern Plains. As an example, Lamar—a city with a population of only 9,000—experiences daily congestion.

Iowa City/Coralville Interchange, Iowa

Between 35,000 and 52,000 vehicles a day travel the I-80 corridor on the west side of **Iowa** City/Coralville, while 34,000 and 21,000 vehicles use the I-380 and US 218 corridors respectively. Thirty percent of the I-80 corridor volume is commercial trucks. The interchange of these roadways is now seeing traffic volumes that exceed its design capacity. By 2030, these volumes are projected to more than double. A proposed project to replace the ramps and increase capacity is estimated to cost more than \$250 million. Without it, traffic will slow to a crawl and congestion will increase.

“Iowa is the crossroads of commercial travel in the United States, with commercial vehicles traversing the state east to west on Interstate 80 and north to south on interstates 35 and 29, making preservation of these routes essential. In addition, the ability to expand capacity when and where necessary, to carry interstate commerce and Iowa’s agricultural and manufacturing supply chain, is crucial to the state’s and the nation’s economic recovery, stability and growth.”

—Nancy Richardson, Director, Iowa Department of Transportation

The four major drivers of freight demand are consumption, production, trade, and supply chain management.

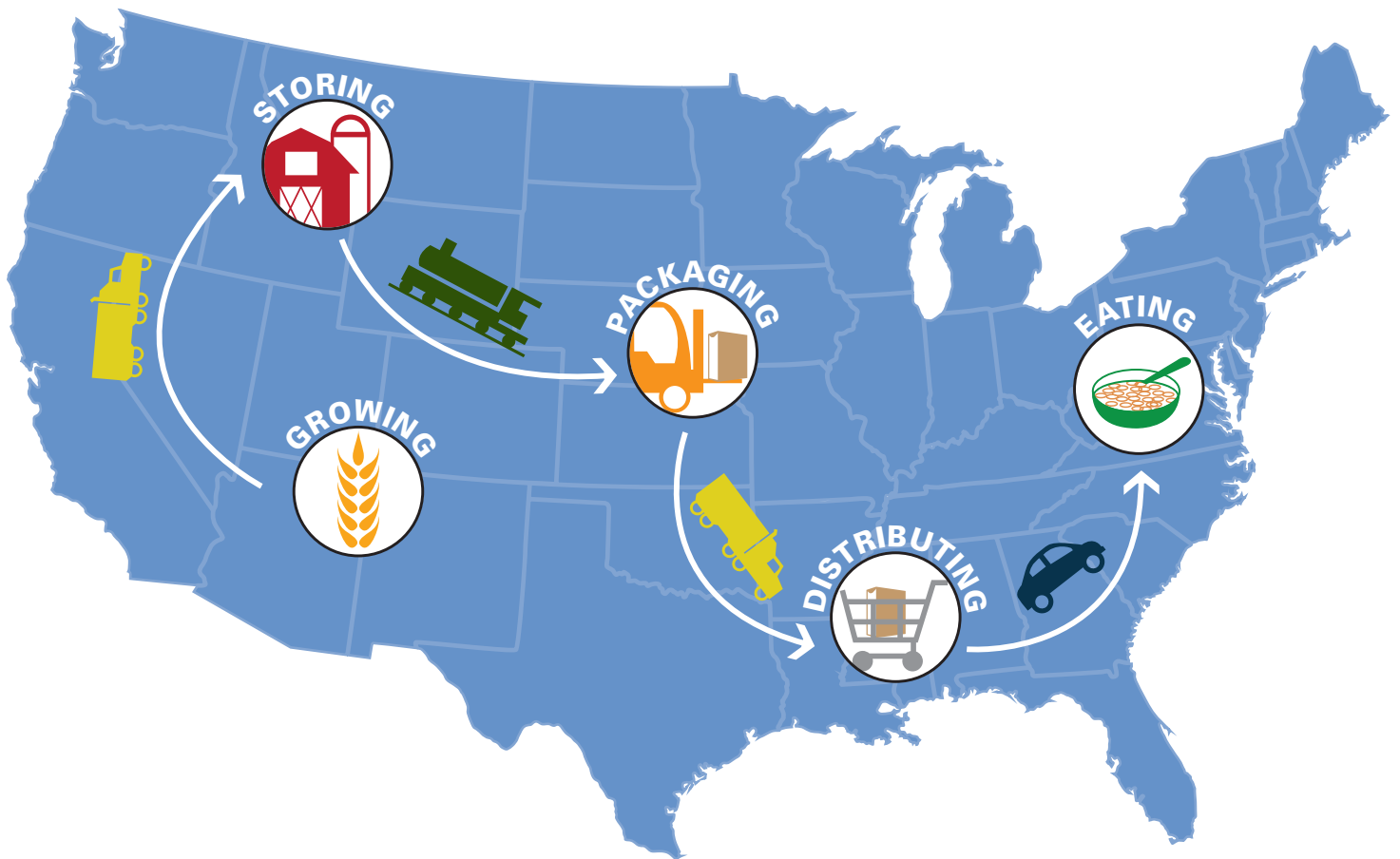
- **Consumption:** The U.S. population reached 308 million in 2010, and is expected to reach 420 million by 2050. A larger population will consume more food, clothing, and other commodities.
- **Production:** Growth in service employment will account for most of the 37 million new jobs expected to be created by 2035. While manufacturing employment is actually expected to decline, investments in technology will lead to an increase in manufacturing output. Overall, growth in goods production will create an increased demand for freight transportation of raw materials, parts, supplies, and finished products.
- **Trade:** The role of international trade in the national economy is increasing. The value of U.S. exports is expected to grow at 5.8 percent annually, outpacing imports which are expected to increase annually by 4.2 percent. The increase of exports and imports will intensify the flow of goods moving through U.S. international trade gateways, at our borders, airports, and seaports.
- **Supply Chain Management.** Thirty years ago most businesses operated “push” supply chains. Suppliers delivered materials to a manufacturer, who pushed products to a retailer, and then to the customer. Each business maintained storage for a large and expensive inventory so they would not run out of critical products. Today, most businesses are moving toward “pull” or “on-demand” supply chains, replenishing whatever the customer consumes as soon as it is sold. Businesses track customer purchases as they occur, reducing and centralizing inventory at fewer locations. Industries that once held large inventories of products and could tolerate delays in shipment now demand greater reliability and the ability to track where their shipments are 24/7.

“The American economic system has become highly dependent upon the timely flow of a supply chain that can keep pace with the public’s demand for goods and services. We must chart a new course and address our infrastructure needs. The construction of new highways and improvements to infrastructure could create thousands of jobs and serve as an economic stimulus for the entire country. In the final analysis, we need to find answers that will strike a balance between our economic needs of today and those that will also assist in meeting anticipated economic growth in the future.”

—Pat Quinn, Co-Chairman & President, US Xpress Enterprises, Chattanooga, TN, Commissioner, National Surface Transportation Policy and Revenue Study Commission, Past President American Trucking Associations.

The Breakfast Cereal “Supply Chain”

From the wheat fields of Colorado to packaging and distribution centers across the country, your breakfast cereal is moved by the country’s freight system and onto America’s kitchen table.





FedEx is one of thousands of carriers who rely on an efficient and integrated transportation system.

Photo by Robert McNamara, courtesy of FedEx.

CHAPTER 2

Staying Competitive in the Global Economy

During the past 30 years, the importance of trade to the United States has increased dramatically. From 1990 to 2010, international trade increased from 13 percent to 30 percent of the economy. As a result, we are dealing with a new economic geography and a new economy. As the 21st Century opened, the old economic geography separating the Free World from the Soviet Bloc gave way to a new economic geography defined by trade blocs that include Europe, North America, Russia, China, India, Asia, South America, and Africa. In the new economy, globalization of the marketplace has led to the redistribution of business activity worldwide. New technologies have transformed businesses and led to a new knowledge economy.

The distribution pattern of trade within the United States has also changed dramatically. During the 20th century, the U.S. transportation system was built to move manufactured and agricultural products from the Midwest through East and West Coast ports to world markets. During the past 30 years, however, U.S. manufacturing has declined and shifted off-shore while the amount of imported goods has risen dramatically. This has resulted in a reverse of the traditional distribution pattern, with major flows moving from Asia through West Coast ports, then over the Rockies by truck and rail to markets in the Midwest and East Coast. With the new deeper and wider Panama Canal expected to open for service in 2015, the pattern may change yet again with more shipments moving through Gulf and Atlantic ports to Midwest and Eastern markets instead of through West Coast ports and across the country.

Investment in world-class infrastructure has become a competitive imperative. The global economy is pressuring countries to upgrade infrastructure in order to remain competitive, gain advantage, or keep from falling behind. China spends nine percent of its gross domestic product on infrastructure, compared to 3.5 percent in India and less than one percent in the United States. The good news is that compared with its competitors, the United States still has the most fully developed, efficient, and productive transportation system. It is losing ground, however, due to age and capacity constraints, and needs to be improved.

“The I-5 Columbia River Crossing is critical to the economic health of the Pacific Northwest. The current bridges over the Columbia River are horribly obsolete and cause the worst congestion in the state. This bottleneck stalls trucks traveling up I-5 and impedes access to the ports of Portland and Vancouver, which Northwest businesses rely on to get their goods to market. Rebuilding these bridges, extending light rail across the Columbia River, and fixing interchanges will provide thousands of critically needed jobs for the construction trades and help ensure that our region's trade-dependent economy can remain strong for years to come.”

—Matthew Garrett, Director,
Oregon Department of
Transportation

Columbia River Crossing

Interstate 5 is the West Coast's primary travel corridor between Canada and Mexico and is a critical link for international and interstate commerce. The five-mile-long Columbia River Crossing project area between Washington SR 500 in Vancouver, and Columbia Boulevard in Portland, Oregon, has long been identified in the region as a major traffic pinch point. It provides access to downtown Vancouver; the ports of Portland and Vancouver; rail connections; and industrial, warehouse, and distribution facilities.

More than \$40 billion in freight crosses the I-5 bridge each year between Washington state and Oregon. Large truck traffic is expected to rise 77 percent in the next 20 years. Currently the area experiences four-to-six hours of daily congestion due to travel demand that exceeds capacity, high collision rates, closely spaced interchanges, poor sight distances, and a lift span bridge that rises for marine traffic about once a day. Congestion could extend to 15 hours a day by 2030, shrinking freight's off-peak travel windows.

To address these issues, the Columbia River Crossing project was developed as a bi-state effort between the **Washington State DOT** and the **Oregon DOT**, along with local and regional partners, to relieve congestion and improve safety. The multimodal solution is expected to relieve peak-hour congestion by 70 percent through improvements to the interchanges, replacement of the bridge, and improving access to all modes of transportation. Current project cost estimates are \$2.6 billion to \$3.6 billion. The project anticipates funding will be shared in roughly equal amounts among Federal, state, and tolling sources.

“The Columbia River Crossing project addresses a critical chokepoint for freight and commerce along a five-mile segment of Interstate 5 between Portland and Vancouver. The bridge replacement project adds capacity, but it also provides more travel choices by extending light rail from Portland to Vancouver along with bicycle and pedestrian facilities. It is a truly multi-modal solution, integrating a new bridge, expanding transit, and improving the transportation system.”

—Paula Hammond, Secretary, Washington State Department of Transportation



Giant cranes load and unload containers from a ship at the Port of Portland's Terminal 6.
Photo courtesy of Port of Portland.

The Trucking Industry

Trucking is a \$620 billion industry. Trucking employs more than three million drivers, with an additional 5.6 million people employed in trucking-related jobs.

The trucking industry is divided into private fleets and for-hire trucking. Private fleets own, maintain, and operate their own vehicles to haul their owners' goods (e.g., Walmart), while for-hire trucking firms carry other people's goods (e.g., J.B. Hunt).

The for-hire industry is split between truckload firms and less-than-truckload (LTL) firms. Truckload firms move shipments directly from origin to destination, while LTL firms collect small individual shipments from many local customers, consolidate them at central terminals, move them to a deconsolidation point, and then deliver the individual shipments to their final destinations.

“Ports to Plains is not just a local project, it is definitely a corridor of national significance. It is a matter of national and economic security to develop our energy resources here in North America and not rely upon overseas nations, who in many cases have been outright hostile to us.”

—Michael Reeves, President, Ports to Plains Alliance



“UPS knows firsthand that the U.S. economy depends on the time-definite movement of freight. An overstressed infrastructure slows delivery times, creates unpredictability in supply chains and ultimately makes U.S. businesses less competitive and consumer goods more expensive. If each of our U.S. package delivery drivers is delayed five minutes each day, the cost to UPS is \$100 million per year. The United States must implement a strategy to increase capacity on America's highways and throughout the national infrastructure.”

—Burt Wallace, Senior Vice President of Transportation, UPS

Photo courtesy of America's Road Team, American Trucking Associations.

Freight Demand by Transportation Mode

The distribution of freight among trucking, rail, water, and air will shift as the economy, trade patterns, and supply chain practices change. As the value and time-sensitivity of shipments increase, businesses will depend upon speed, reliability, and visibility enroute, sending more shipments by truck and air and fewer by rail and water, even though all modes will see tonnage growth. The freight tonnage carried by truck is expected to increase by 41 percent by 2035, while railroads are forecast to carry 38 percent more than they do today.



“By 2020 the U.S. trucking industry will move three billion more tons of freight than we haul today. To meet this demand, the industry will put another 1.8 million trucks on the road. As it stands, critical highway corridors are already congested, slowing supply chains and forcing manufacturers to carry safety stocks due to concerns about the reliability of the highway system. An inefficient highway system makes it harder for U.S. businesses to compete in global marketplaces, increases consumer prices, and impacts job growth. An investment in our highways will pay dividends throughout the economy, and it is past time that we start putting more resources into transportation and targeting the most critical projects. The U.S. Department of Transportation has identified the worst highway bottlenecks in the country. These chokepoints increase freight costs and cause trucks to burn extra fuel, increasing air pollution. We estimate that the annual cost of delay at these bottleneck locations alone is \$19 billion. Congress should create a new program with funding dedicated to addressing the most serious problems on the nation’s most important freight corridors. We must also focus more resources on the National Highway System, which carries 44 percent of all traffic, including 75 percent of truck traffic. It is time for the Federal government to reevaluate its spending decisions and concentrate its limited transportation resources on those investments which will do the most good for the greatest number of people.”

—Bill Graves, President and CEO, American Trucking Associations

A third type of for-hire trucking company is a package or parcel carrier such as UPS and FedEx, which compete with the U.S. Postal Service for the parcel transportation market, but also have a growing presence in the LTL sector, and are leaders in the air freight industry.

Specialized truckload carriers transport specific types of goods, such as petroleum, chemicals, logs, and concrete.

Private fleets accounted for 44 percent of industry revenues; truckload firms for 49 percent; and less-than-truckload firms for about seven percent.



“Whether it’s by supporting millions of American jobs, keeping the things we buy and use more affordable, or easing highway congestion and lowering greenhouse gas emissions, freight rail confers tremendous public benefits on society. Offering states more opportunities to partner with freight rail will leverage significant private dollars for transportation investments and can lead to reduced future maintenance costs on the nation’s highways. Such partnerships can entice privately owned freight railroads to invest private dollars to capture private benefits and can provide broad public returns for the public funds invested. As our economy continues to rebound, so will the demand to move more people and goods by rail. Now more than ever it will be important that freight rail maintains the ability to invest in the nation’s freight rail network and help keep America’s economic engine running.”

—Edward R. Hamberger, President, Association of American Railroads

Heartland Corridor, Ohio



The **CSX National Gateway** project is another Ohio priority.

“These projects can create thousands of jobs and generate millions of dollars in state and local revenues. This is a strong example of how partnerships between the Federal, state, local, and private sectors can help unlock the capacity of freight, increase efficiencies and open up business development opportunities. These types of projects greatly benefit communities, regions and states.”

—Jolene Molitoris, Director, Ohio Department of Transportation

The five-year effort to double-stack and clear 29 tunnels and other overhead obstacles along the Heartland Corridor through **Ohio** and points west will create the most direct route for freight movement in the eastern United States. This project will reduce travel between Columbus and Norfolk, Virginia, by 300 miles.

“FedEx recognizes the need for increased investment in our nation’s infrastructure. Shippers and consumers alike are increasingly enjoying significant benefits from efficiencies gained in supply chain management and our strong competitive position in the global marketplace. In order for these advantages to continue undeterred, we strongly advocate appropriate reinvestment in the very infrastructure necessary for the efficient movement of goods to, from and throughout the U.S. FedEx encourages lawmakers, the administration and the private sector to work together to quickly develop a comprehensive integrated transportation policy. We must make these efforts now—or pay later through impacts to our economy and competitiveness.”

—Bill Logue, President and CEO, FedEx Freight Corp.

“Pennsylvania's aggressive rail freight funding program has strengthened businesses, reduced truck traffic and offset growth in greenhouse gases. The United States must take a similar approach during the next reauthorization not only to compete globally, but also be a global partner in addressing climate change.”

—Allen D. Biehler, Secretary,
Pennsylvania Department
of Transportation



The Freight Rail System

The freight rail system in the United States is privately owned and operates at three tiers: Class I, regional, and local. The seven Class I railroads provide long-haul services throughout the United States with connections to Canadian and Mexican railroads. The Class I railroads account for 68 percent of system mileage and 93 percent of freight revenue. In 2007, the Association of American Railroads produced a needs report estimating that an investment of \$148 billion for infrastructure expansion during the next 28 years would be required to keep pace with economic growth and the freight rail demand forecast. The Class I share was estimated at \$135 billion. AAR estimated that the Class I railroads could fund \$96 billion of this amount, but that the balance of \$39 billion would have to come through public-private partnerships with the states, Federal investment tax credits, or other means.

By 2035, railroads are expected to carry 38 percent more cargo than they do today. An issue is whether the railroads can expand fast enough to keep up with this demand. If they cannot, much of this growth will be shifted to the highway system. Because much of the highway system is already

Duluth Intermodal Project, Minnesota



The Duluth Intermodal Project would upgrade the key port, rail, road and bridge infrastructure that serves as a hub for intermodal shipments from the port to points in **Minnesota** and beyond. The existing capacity and physical condition of the infrastructure restricts intermodal freight movements through the region, causing delays and lost productivity. Duluth is a critical intermodal connection, and impediments to freight flows impact the state, regional and national economy, making these improvements an absolute necessity.

overloaded with traffic, state departments of transportation have a stake in seeing as much long-haul freight as possible transported by rail.

Studies show that intermodal shipping—including both rail and trucks—will grow at an annual rate of four percent over the next 25 years. Because of this, trucking’s share of freight ton-miles is expected to drop from 62 percent to 59 percent during this time. Although this will clearly be helpful, it is evident that the shift in overall market share will be modest.



“Through the Port of Natchez, up and down the Mississippi and through its important rail and road connections, goods are moving to and from Europe, Africa, Latin America, Canada, Asia and points around the U.S. The result is business for our state; jobs and income for our workers; and tax revenues for our governments.”

—AASHTO President Larry L. “Butch” Brown, Executive Director of the Mississippi Department of Transportation

Ports and Waterway Systems

The nation’s waterborne freight system has three tiers: seaports, the Great Lakes/St. Lawrence Seaway system, and the inland waterways including major rivers, canals, locks, and dams. The seaports handle 96 percent of international waterborne tonnage and virtually all of the nation’s trade in high-value containerized goods. The Great Lakes system handles over one-third of domestic waterborne trade in ores and aggregates and conveys other commodities including coal and manufactured goods. The inland waterway system (such as the Mississippi and Ohio rivers) moves cargo primarily by barge through a system of locks and dams.

Port of Lewiston, Idaho



Photo courtesy of Port of Lewiston.

Located on the Lower Granite Dam reservoir, the Port of Lewiston, **Idaho**, is the most inland public port on the U.S. West Coast. Idaho’s seaport exports products from Idaho, Montana, Washington, Oregon, the Dakotas, and Wyoming, and includes containerized wheat, peas, and lentils, 85 percent of which is exported overseas. The 30-year-old, 120-foot container dock is not large enough to meet current demands and continued export growth. By expanding the wharf and rerouting Idaho 128, improvements in truck and intermodal movements will allow a better flow for more truck traffic into and from the port. The total project cost is estimated at \$12 million.



“With adequate maintenance and capital investment, our ports and waterways are the backbone of our transportation system—ensuring domestic and international trade opportunities and low-cost, environmentally sound goods movements. The cost for transportation over inland waterways is two to three times lower than other modes of transportation, translating into an annual savings of \$7 billion for American businesses. More than 67 percent of all U.S. consumer goods pass through the nation’s harbors. We must make it a priority to recapitalize and rehabilitate these valuable assets.”

—Amy Larson, President,
National Waterways
Conference

Waterways

In the United States, 240 operational lock chambers funded by the U.S. Army Corps of Engineers handle more than 620 million tons of barge freight each year. More than half of these chambers are more than 50 years old and have exceeded their economic design lives. Many locks currently in use are too small for today’s larger tows. They are susceptible to closures and long delays for maintenance and repairs, resulting in lines and long wait times for users. Consequently, the inland waterways are an underutilized mode in the multimodal system, constrained simply as a result of inadequate investment. Without significant improvement, moving more traffic to the waterways from highway and rail would further strain their capacity.



“The movement of freight, both from domestic and international markets, is critical to the U.S. economy. Yet, according to the National Surface Transportation Policy and Revenue Study Commission, freight movements are increasingly choked by a lack of adequate capacity. Without improvements, freight transportation will become less efficient and reliable, hampering the ability of American businesses to compete. Inadequate infrastructure hurts the economy, and the businesses, workers, farmers, and consumers that drive it. The answer to this dilemma is to raise the priority of freight transportation infrastructure, including infrastructure in and around America’s ports, in the next surface transportation bill. This will help reduce congestion, improve the environment, facilitate goods movement, enhance our international competitiveness, and create jobs.”

—Kurt J. Nagle, President and CEO, American Association of Port Authorities (AAPA)



Construction at the
Port of Long Beach.

Seaports



America's seaports are a critical link to the global marketplace. In 2007, U.S. seaports and marine cargo operations generated nearly \$3.2 trillion of total economic activity. U.S. seaports handle more than two billion tons of domestic, import, and export cargo annually, including food, clothing, medicine, fuel, and building materials, as well as consumer electronics and toys.

Connector roads around ports are often the weak link in the goods movement network. Ports are areas where roads and rail converge, often at the same grade, causing congestion and delays as trucks wait for trains to clear intersections. Delays and idling trucks then exacerbate negative air quality impacts on the surrounding communities. Many of these roads are in disrepair, have inadequate turning radii, and are generally not fit for the volume of freight traffic they must endure.

Many coastal ports do not have sufficient channel depth or adequate bridge clearances to accommodate larger “post-Panamax” vessels. For example, the Bayonne Bridge in New Jersey would block post-Panamax ship access to the ports of New York and New Jersey, the third largest container port in the United States.

The FAST Corridor, Washington State



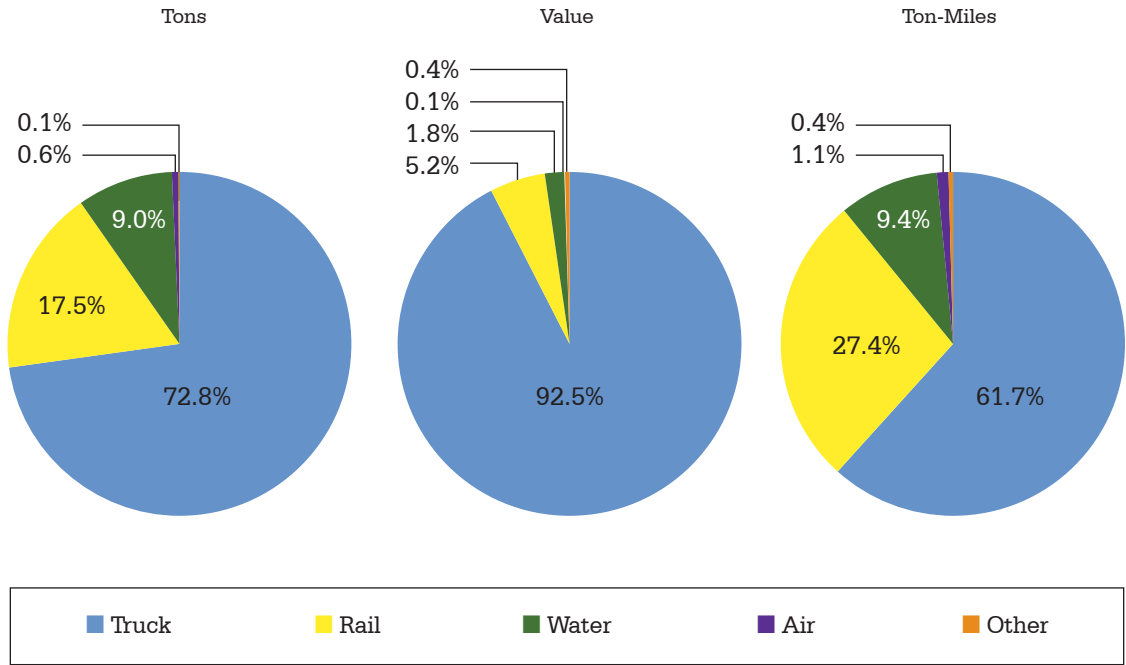
Photo courtesy of Puget Sound Regional Council.

The FAST Corridor is a freight-mobility and traffic enhancement program supported by **Washington State DOT**, the Ports of Seattle, Tacoma and Everett, and the Puget Sound Regional Council. It consists primarily of projects that raise roadways above at-grade rail crossings, allowing trains, trucks, and cars to move more efficiently. One of the projects needed is the East Marginal Way Grade Separation. It will provide a bridge allowing freight traffic and other vehicles to pass over rail lines that connect Port of Seattle terminals to rail yards and transcontinental rail lines at a cost of \$48 million. The project will reduce vehicle delay at railroad tracks, estimated to be over 270 cumulative hours daily in 2010.

Trucking's Market Share Expected to Grow

As shown below, in 2005, trucks on highways carried 73 percent of all domestic freight by tonnage and 93 percent of freight by value.

Freight Tons, Value and Ton-Miles by Mode, 2005



Source: IHS-Global Insight, Inc., 2007Transearch data and economic projections.

Reconstruction of I-94, Wisconsin



Photo courtesy of Wisconsin Department of Transportation.

The reconstruction of I-94 to an eight-lane freeway from Milwaukee to the Illinois border with design and safety improvements is a critical freight need in **Wisconsin**. The region has the most businesses and manufacturers in the state—40 percent—and more than two million people—38 percent of the state's total population. Almost 60 percent of the region's manufacturers are located within two miles of the interstate system. More commodities (by tonnage) are moved by truck in this region than other locations in the state.



By 2035, trucks and the highway freight system will carry 74 percent of all domestic freight by tonnage (up from 73 percent) and account for 95 percent of freight revenues (up from 92 percent). However, the truck share of ton-miles is projected to drop from 62 percent to 59 percent as more long-distance freight moves by intermodal rail.

Changes in consumption, production, trade, and supply chain practices will generate

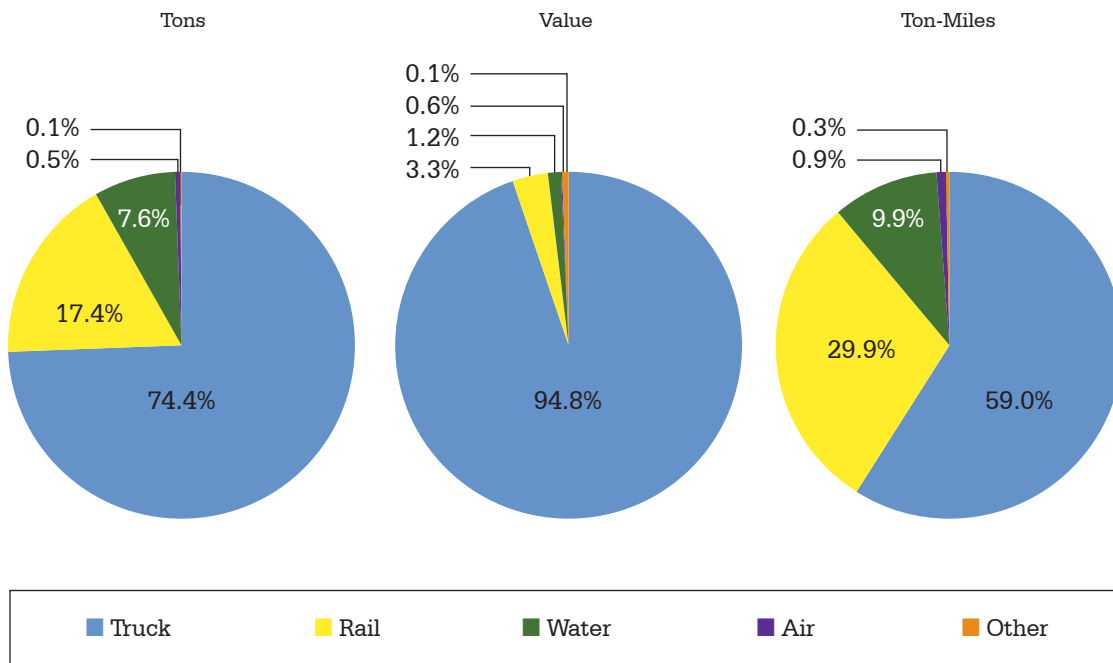
over five billion new tons of freight to be moved in 2035. Trucks on highways will carry 79 percent of those five billion new tons, an increase of 41 percent for trucking.

Accommodating the projected highway freight demand will be a major challenge. Every two trucks on the road today will have one more truck behind them by 2035. By 2050, the number of trucks on the road compared to today will double.

“Whether you buy locally or ship globally, improved freight mobility is key to minimizing costs, improving competitiveness, and managing the carbon footprint of our goods movement. We can maximize success in achieving those goals by reflecting the needs of the supply chain in our local, state, and regional plans and in our public, private, and joint investment.”

—Beverley Swaim-Staley,
Secretary, Maryland
Department of
Transportation

Expected Freight Tons, Value and Ton-Miles by Mode, 2035



Source: IHS-Global Insight, Inc., 2007 Transearch data and economic projections.



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WAL-MART
SPORT
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LOCATION 7834

TORACED
FREE
WAL-MART
TRUCK



**US DOT 063585
MC NO 311233
KYU 052486**



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America's Road Team
Photo courtesy of
America's Road Team,
American Trucking
Associations.

CHAPTER 3

Corridors of Congestion Instead of Corridors of Commerce

The U.S. freight system underpins much of the prosperity and quality of life enjoyed by Americans today. It provides businesses and consumers with unparalleled choices, offers the best service and value in the world, and bolsters the competitiveness of U.S. industries in the global economy. For freight transportation, the U.S. highway system is the vital circulatory system. Its condition and performance are critical to the productivity of the trucking industry and the economic competitiveness of shippers and receivers who depend on trucking.

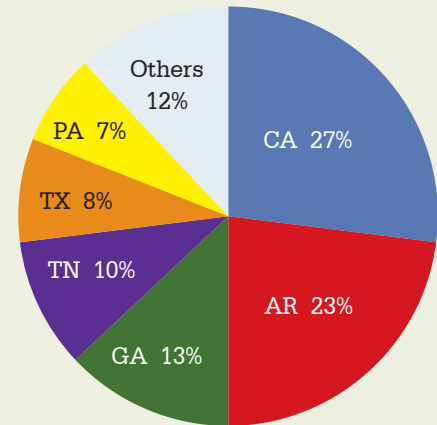
Trucking plays the dominant role in freight transportation because the United States has the most extensive and far-reaching highway system in the world. Just over four million route-miles of highways and local streets—totaling more than eight million lane-miles—link cities, states, and regions. For more than 80 percent of American communities, trucks are the only available freight mode.

By comparison, the next-largest highway networks are in India, with roughly 3.3 million lane-miles, and in China, with approximately 1.8 million lane-miles. Both nations, however, are expanding their networks to support and stimulate economic growth. China is building a 53,000-route-mile national expressway system that will rival the 47,000-route-mile U.S. Interstate Highway System, and India is building a 10,000-route-mile national expressway system.

INRIX 2009 National Traffic Scorecard: The Nation's Busiest Long-Haul Freight Roadways

The high-tech INRIX Corporation produced a study in 2009 that identified the 1,000 miles of expressways carrying the highest volumes of long-haul truck freight. Nineteen states have portions of roads in the most heavily used 1,000 miles; however, 88 percent of the mileage comes from just six states—California, Arkansas, Georgia, Tennessee, Texas, and Pennsylvania.

Twenty-eight different roads carry more than 50 percent of the mileage coming from I-40, I-10, and I-81.



Roads by States Accounting for the Nation's Busiest 1,000 Miles

Roads that serve as thoroughfares in the middle of the country, including I-40 and I-81, show more long-haul freight usage than the roads at the edges of the country, such as I-5 and I-95. I-40 alone—crossing through Arkansas and Tennessee—accounts for nearly one-third of the nation's busiest miles.

Most Active 1,000 Freight Miles, Nationwide

State	I-5	I-10	I-15	I-20	I-24	I-30	I-35	I-39	I-40	I-44	I-55	I-57	I-64	I-65	I-70	I-75	I-78	I-80	I-81	I-84	I-85	I-94	I-95	I-210	I-285	I-294	I-710	CA-60	Total
California	30.6	101.4	81.8																					14.6			2.3	40.1	270.9
Arkansas									229.1																				229.1
Georgia					0.9											73.4					14.2				44.9				133.4
Tennessee					10.8				85.9		0.4					0.5													97.6
Texas				8.6		0.2	71.6																						80.5
Pennsylvania																	4.5		62.6										67.1
Indiana													0.9	1.6				28.7											31.1
Illinois											0.4	0.8						14.4								14.9			30.5
Virginia													4.7						24.6										29.2
Missouri										16.6																			16.6
Ohio															5.1			0.5											5.5
West Virginia																				2.7									2.7
Kentucky													1.6																1.6
Maryland																			1.4										1.4
Wisconsin								1.0															0.3						1.3
New Jersey																		0.3					0.6						1.0
New York																							0.8						0.8
South Carolina																					0.7								0.7
Massachusetts																			0.3										0.3
Total	30.6	101.4	81.8	8.6	11.8	0.2	71.6	1.0	315.0	16.6	0.7	0.8	4.7	2.4	6.6	73.9	4.5	43.9	91.3	0.3	14.9	0.3	1.4	14.6	44.9	14.9	2.3	40.1	1001.3

Source: INRIX 2009 National Traffic Scorecard. For more info, go to <http://cot.ag/cejX9U>.

Capacity Not Keeping Up with Increasing Amounts of Freight

Between 1980 and 2006, traffic on the interstate system increased by 150 percent, while interstate capacity increased by only 15 percent.

Because capacity has not kept pace with travel demand over the past four decades, the amount of traffic experiencing congested conditions at peak hours in the nation's most urban areas on the interstate system doubled from 32 percent to more than 67 percent.

The demand for highway travel, including freight transportation, has outstripped the ability of the state DOTs to deliver new capacity, to manage congestion, and to ensure reliable freight and passenger transportation. Central to the problem are major highway bottlenecks at urban interstate interchanges that cause tens of thousands of hours of delay each day, week, and year for truckers, business travelers, and commuters. As more and more urban areas become saturated with traffic, strings of bottlenecks are emerging along regional and transcontinental freight routes, creating corridors of congestion instead of corridors of commerce.

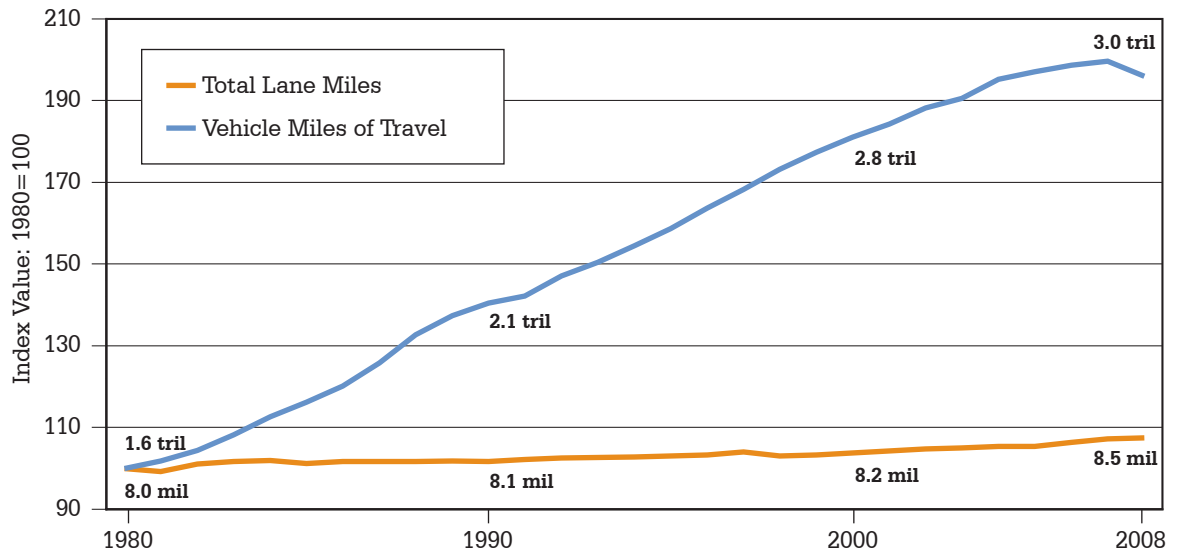


Freeway congestion on Interstate 15 in Las Vegas.

Growth in the Number of Miles Driven Versus Number of Miles of Travel Lanes, 1980 to 2005

“Our trucks go up and down I-5 every day. Delays make it impossible to make deliveries up to Washington on time. This costs us an extra day each time we go through Portland. I calculate one day of work for our trucks at almost \$1,000 per day. If you add up all the trips we make through Portland, going both north and south, for all 500 of our trucks, these delays really start to add up.”

—Michael S. Card,
President, Combined
Transport, Inc.,
Central Point, Oregon



Note: VMT: Vehicle Miles of Travel or Number of Miles Driven versus Existing Lane Miles (For example, a one-mile length of a four-lane highway equals four lane miles).

Source: Federal Highway Administration, *Highway Statistics*.

The result has been a sharp increase in congestion and delay that affects trucks as well as automobiles.

Trucks account for a relatively small proportion of total miles driven. Large tractor-trailer trucks account for five percent; and smaller, three-axle freight trucks account for another three percent. But trucks are very sensitive to congestion. As an integral part of the nation's production and distribution machinery, when trucks are delayed, the added costs—in fuel, driver time, and missed deliveries—are passed back to shippers as a higher cost of doing business and then to consumers in the higher prices they have to pay for food, clothing, and other necessities. And because trucks carry such a huge proportion of the nation's freight, the increases in transportation costs add up quickly and have a noticeable effect on total logistics cost and the national economy.

The increase in freight demand and truck travel means that where today 10,500 trucks travel each day on some segments on the Interstate Highway System, by 2035, this will increase to 22,700 trucks for these portions of the interstate, with the most heavily used segments seeing upwards of 50,000 trucks a day.

Much of the congestion occurs today at bottlenecks on the highway system—specific physical locations that routinely experience recurring congestion and traffic backups because traffic volumes exceed highway capacity. The American Trucking Associations estimates that the annual cost of delay at these bottlenecks comes to \$19 billion.

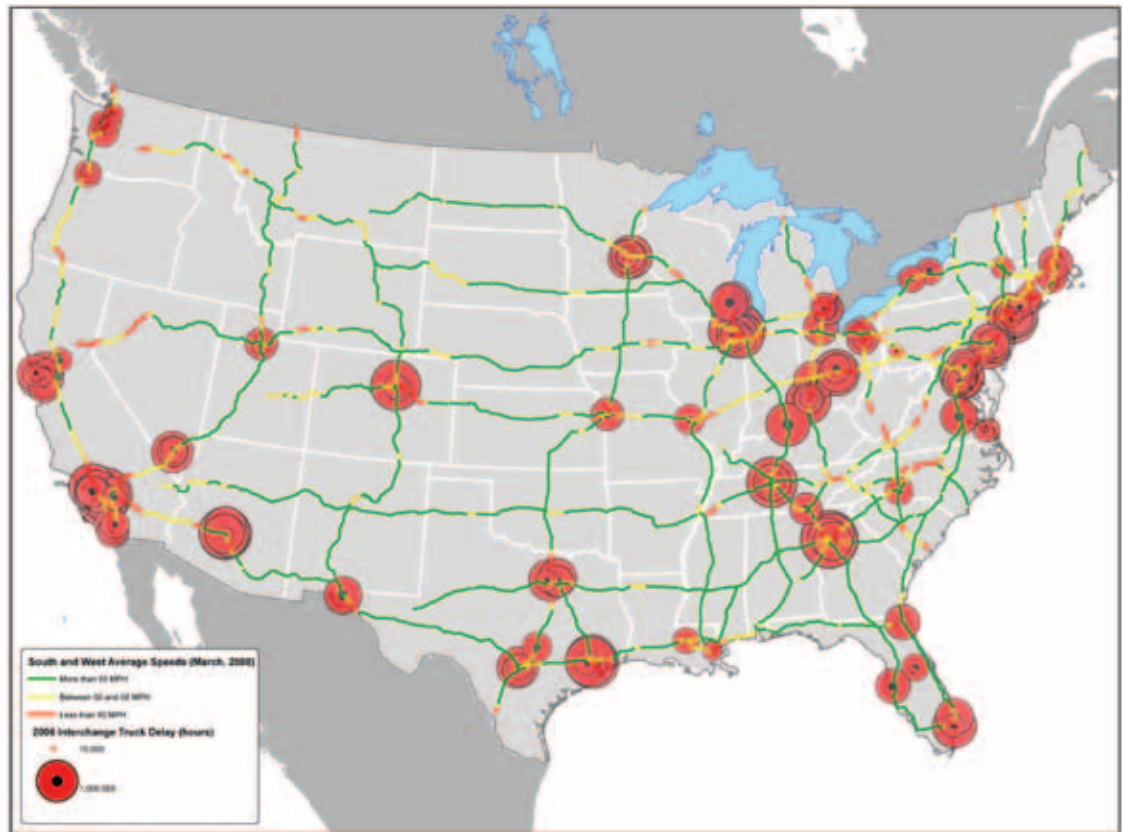
“The Kew Gardens Interchange—built in the 1930s, well before interstate standards were developed or the world economy of today emerged—is now a key link serving thousands of trucks traveling each day to and from John F. Kennedy International Airport, the busiest air-freight facility in the nation. It is critical that this complex urban highway be upgraded not only to meet current safety standards and travel needs, but to adequately and efficiently accommodate the national and international-bound freight that passes through this interchange each day.”

—Acting Commissioner Stanley Gee, New York State Transportation



Photo courtesy of the New York Department of Transportation.

Major Freight-Truck Bottlenecks at Highway Interchanges, 2008



Source: Cambridge Systematics, Inc., "Estimated Cost of Freight Involved in Highway Bottlenecks." Report prepared for the Federal Highway Administration, Office of Transportation Policy Studies, November 12, 2008.

Estimates of the truck hours of delay for the worst freight-truck bottlenecks show that each of the top 10 highway interchange bottlenecks cause over a million truck-hours of delay per year.

The U.S. Department of Transportation has identified the worst highway bottlenecks in the country. Those chokepoints increase freight costs and cause trucks to burn extra fuel, increasing air pollution.

Estimated Annual Delay Hours at Major Highway Bottlenecks for Trucks, 2006

Rank	Bottleneck Name	Annual Delay (hrs)	
		All Vehicles	Trucks
1.	I-405 at I-605 in Los Angeles, CA	19,363,000	2,662,600
2.	SR-60 at I-605 in Los Angeles, CA	17,004,600	2,400,200
3.	I-75 at I-285 in Atlanta, GA	17,330,400	2,253,000
4.	I-55 at Pulaski in Chicago, IL	12,590,600	1,888,600
5.	I-80 at I-580/I-880 Oakland, CA	17,192,800	1,838,700
6.	I-285 at I-85 in Atlanta, GA	13,962,100	1,815,100
7.	I-90/94 at I-290 in Chicago, IL	22,427,800	1,600,300
8.	I-80 at I-94 split in Chicago, IL	7,585,300	1,365,300
9.	I-15 at I-10 in Los Angeles, CA	7,248,200	1,308,300
10.	I-880 at SR-238 in Oakland, CA	11,951,400	1,200,300
11.	I-90 at I-290 in Buffalo, NY	6,563,400	816,300
12.	I-93 at I-95 in Boston (South), MA	5,189,400	726,500
13.	I-77 at I-277 in Charlotte, NC (South)	3,884,200	660,300
14.	I-90 at I-94 split in Chicago, IL	4,871,100	584,500
15.	I-17 at I-10 in Phoenix, AZ	4,153,500	493,200
16.	I-710 at I-105 in Los Angeles, CA	4,779,800	425,200
17.	SR-315 at I-70 in Columbus, OH	3,062,600	367,500
18.	I-75 at I-74 in Cincinnati, OH	2,589,200	305,800
19.	I-20 at I-285 in Atlanta, GA	2,289,200	285,100
20.	I-75 at I-85 in Atlanta, GA	3,894,600	272,600
21.	SR-134 at SR-2 in Los Angeles, CA	3,997,500	267,600
22.	I-290 at I-355 in Chicago, IL	3,295,200	263,600
23.	I-93 at I-90 in Boston, MA	2,411,300	175,800

Source: Technical White Paper, "Application of Detailed Interchange Analysis to Top Freight Bottlenecks: Methods, Results, and Road Map for Future Research," Draft #2, prepared for Federal Highway Administration, Office of Transportation Policy Studies, by Cambridge Systematics, Inc., in association with Battelle Memorial Institute, September 1, 2006.

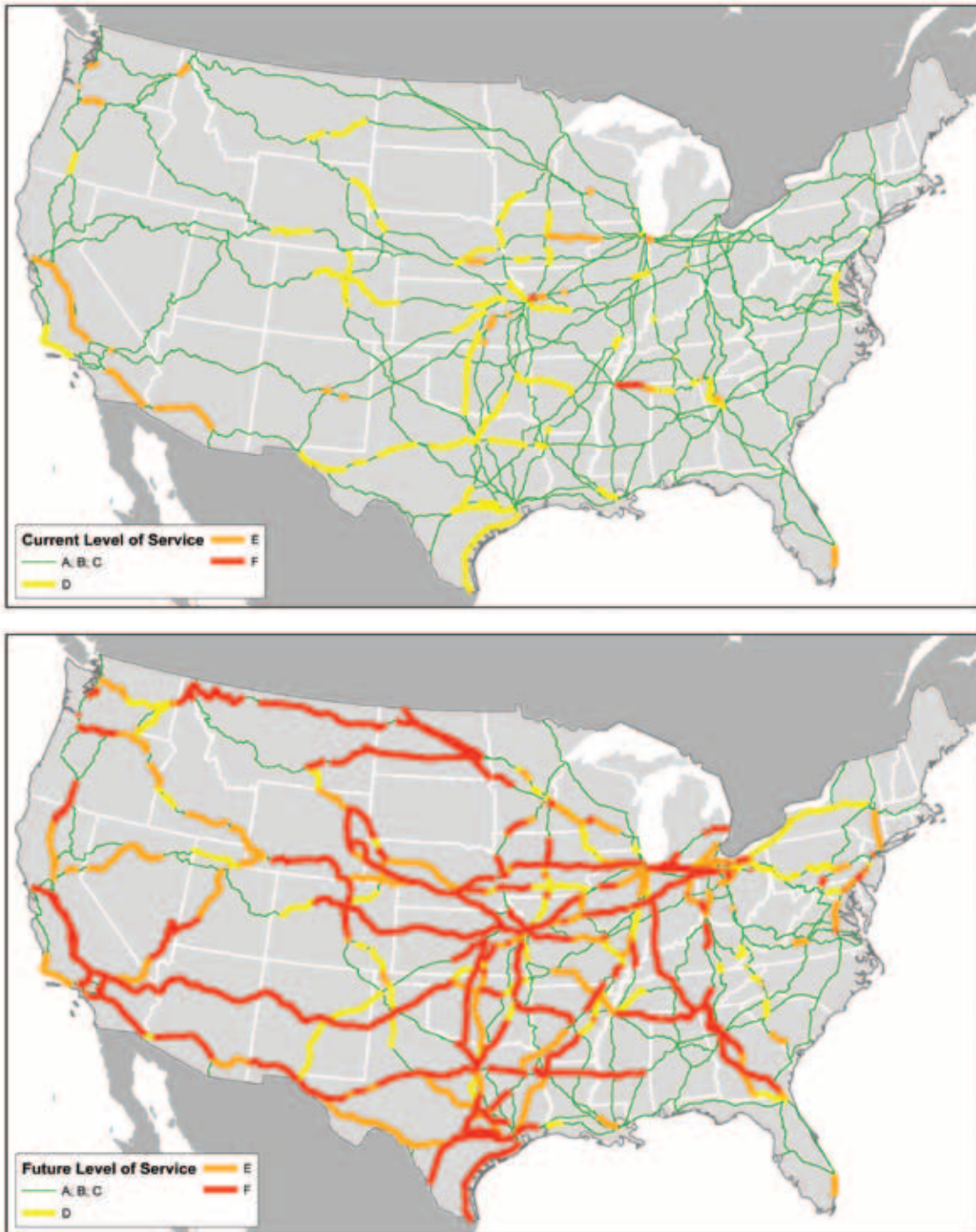
When bottlenecks are strung together, as they would be seen along the route of a regional or long-haul truck trip, the delay costs add up quickly.

Moving Goods by Rail

The passage of the Staggers Act in 1980 substantially deregulated the freight rail system. Since then, U.S. freight rail companies have reduced costs, reduced rates, increased business, and increased capital investment. The result has been a freight rail system that the rest of the world looks to with envy. After decades of cutting track mileage and expanding business, however, the freight rail system is developing capacity constraints.

The Association of American Railroads estimates that the Class I railroads will be able to fund only 70 percent of the \$135 billion they need to meet growing demands in the freight rail network during the next 30 years. For the remaining 30 percent, states will need to collaborate with the railroads on public-private partnerships and support federal investment tax credits where the capacity improvements involved are determined to be in the public interest.



Freight Rail Level of Service Relative to Capacity Today and 2035

Source: Cambridge Systematics, Inc., "National Rail Freight Infrastructure Capacity and Investment Study." Report prepared for the Association of American Railroads, September 2007.



*Photo courtesy of
Port of Tacoma.*

CHAPTER 4

What Must Be Done to Keep Freight On the Move

Our nation's economy is dependent on a well-functioning and efficient transportation system, which in turn depends on the capacity and condition of the underlying infrastructure—our highways, bridges, rail lines, tunnels, ports, harbors, and channels.

We know that demand for freight transportation is growing. We know that this will exacerbate congestion that already is adding to shipper and carrier costs. We know where the bottlenecks and choke points are, and we know how to fix them.

We are not addressing these problems, however, because few state transportation agencies have the money to tackle them. In the case of several major projects of national significance that would create benefits both regionally and nationally, their costs are so high they cannot be funded by a single state.

Yet, if we do not address these bottlenecks, the future cost to the nation's economy is staggering. Delay at these bottlenecks and across the highway freight system is growing much faster than the growth in traffic. Perhaps an even greater impact than the total amount of delay is the continuing growth in variability in travel time across the highway freight system. In this era of just-in-time delivery, travel times must be based on the highest expected delay, rather than average delay. This is exacting a high cost in freight transportation—and ultimately adding costs to the consumer.

The Interstate Highway System and other major Federal and state highways making up the National Highway System were built to secure the benefits of interstate trade. But little provision has been made to accelerate investment in the nation's freight transportation systems. The nation cannot afford to ignore the mounting needs of freight transportation and the consequences of inaction.

“States like Nevada and others in the west are ‘bridges’ of commerce between the more populated Midwest and West Coast. But we’re pretty significant in the ‘transconomy.’ If the bridge is out, you can’t get there from here—and if the bridge needs to be maintained, those who benefit—all across the country—should share the cost. That’s why it is so critical that we need Federal investment from Washington to keep these Interstates and highways moving.”

—Susan Martinovich,
AASHTO Vice President
and Nevada Transportation
Director

I-5, Douglas, Josephine, and Jackson Counties, Oregon



Interstate 5 is the West Coast's major trade corridor and one of the top freight routes in the nation. As it passes through Douglas, Josephine, and Jackson counties in southern Oregon, I-5 travels through rugged mountain terrain with steep grades. Five of the top 25 steep-grade truck bottlenecks on the nation's freeways are on this stretch of freeway, causing nearly 1.3 million annual hours of delay for trucks. These sections of freeway also suffer from a crash rate about 40 percent higher than the statewide average for I-5. With truck volumes expected to significantly increase on I-5, by 2025 a number of these steep grades are expected to produce congestion that will rival urban freeways. ODOT and the Federal Highway Administration have identified the need for truck climbing lanes at multiple locations in southern Oregon, at a cost exceeding \$100 million.

Build the Capacity Improvements That Are Needed

The AASHTO 2007 *Future Options for the Interstate Highway System* study illustrated the kind of capacity increases needed to meet national freight needs. Its recommendations were as follows:

To connect America to the global economy, the capacity of the Interstate Highway System will need to be expanded in five ways:

- 32,000 lane-miles will need to be added to the current interstate system.¹
- 14,000 lane-miles of the current National Highway System will need to be upgraded to interstate standards.
- 14,000 lane-miles will need to be added to NAFTA corridors.
- 8,000 lane-miles of truck-only toll facilities will be needed.
- 400 lane-miles will be needed to provide access to key port and intermodal facilities.

¹ One lane-mile is one mile of one lane of a roadway; a one-mile length of a four-lane highway equals four lane miles

Create and Fund a Freight Program

AASHTO is recommending that the Federal highway program be expanded to include a new freight program distributed by formula to the states. We are gratified that the authorization bill proposed by Chairman James Oberstar in the U.S. House of Representatives contains such a proposal. We also believe there are freight projects of national significance that should be funded at the Federal level.

If the highway program were funded at \$375 billion over six years as AASHTO proposes, approximately \$3 billion annually should be apportioned to the states for freight investment from the Highway Trust Fund, and \$7 billion should be provided annually through freight fees outside the Highway Trust Fund. Half would be distributed by formula to the states, and the other half would be distributed through a national competitive grant program.

AASHTO has also called upon the U.S. DOT, in cooperation with the states and other freight stakeholders, to develop a National Multimodal Strategic Freight Plan, and we support the creation and funding of multi-state freight corridor planning organizations to develop plans for the improvements needed at the regional level.



Photo courtesy of American Association of Port Authorities.

Invest in Intermodal Connector Improvements

Adding capacity for global trade means providing necessary port capacity and reliable connections between ports and international border gateways and the nation's highway and rail networks. Dredging deeper harbors and addressing bridge clearances that are too low for the vessels that will come through the Panama Canal should be a priority. AASHTO recommends that the existing surplus now in the federal Harbor Maintenance Trust Fund should be used for dredging and harbor maintenance.

The intermodal freight connectors of the National Highway System (NHS) are the first and last miles of roadway used by truckers to travel between major highways of the NHS and the nation's ports, rail terminals, and air cargo hubs. They are usually local roads and often weave their way through older industrial and residential neighborhoods. They are critical connectors but are often the weakest links in the freight transportation network. Without attention to the "last mile" of freight transportation, the value of the investment in national highway and rail connectivity is much reduced. Under a new freight program, intermodal connectors should be made eligible for assistance and encouraged as a priority.

Memphis Regional Intermodal Facility, Norfolk Southern Railroad Crescent Corridor, New Jersey to Louisiana

The Memphis Regional Intermodal Facility is a critical component of a larger, multistate/multipartner initiative located along Norfolk Southern Railroad's Crescent Corridor. The 2,500-mile network of existing rail lines extends from New Jersey to Memphis and on to New Orleans. Tennessee is joining with Pennsylvania, Virginia, Alabama, and Mississippi to partner with Norfolk Southern to develop regional intermodal freight distribution centers. This will strengthen both domestic and international distribution in the Southeast, Gulf Coast, and Mid-Atlantic states.



Source: Norfolk Southern Corp.

"It's important to utilize all of our transportation options when it comes to the movement of freight. Rail is a key component to Tennessee's transportation network. The new intermodal facility will eventually result in more long-haul freight moving by train, which will have the additional benefit of relieving congestion on our crowded interstate highway system."

—Gerald Nicely, Tennessee
Transportation Commissioner

Urgent Capacity Needs to Address Freight Movement

ALABAMA: Interstate 10 Mobile River Bridge—Mobile and Baldwin Counties

ALASKA: Knik Arm Bridge—Anchorage, Alaska

ARIZONA: Rail Improvements—Phoenix-to-Tucson Corridor

CALIFORNIA: Freight Movement Enhancement Projects

COLORADO: Ports-to-Plains Corridor

DELAWARE: Regional Freight Study for the Delmarva Peninsula
Port of Wilmington Parking Study
Chesapeake Connector
I-95 Corridor Coalition

FLORIDA: Eller Drive Overpass at Port Everglades, FL

GEORGIA: Jimmy DeLoach Connector

IDAHO: U.S. 95, Garwood to Sagle Expansion
Expansions of Port Lewistown Dock and Idaho 128
U.S. 95, Thorncreek Road to Moscow, Stage 1 Expansion
Meridian Interchange Replacement
I-84 Central Treasure Valley Gap Closure Project
Idaho 75, Timmerman to Ketchum Expansion
I-84/U.S. 93 Interchange, Stage 2 Expansion
U.S. 30, Lava Hot Springs to Fish Creek Expansion
U.S. 20 at I-15 Reconstruction

IOWA: Iowa City/Coralville Interstate 80 Corridor

KANSAS: Johnson County Gateway Project

LOUISIANA: Interstate Highway Improvements

MARYLAND: Maryland Statewide Freight Plan

MASSACHUSETTS: Interstate 95/Interstate 93 Interchange
Reconstruction

MICHIGAN: Detroit Intermodal Freight Terminal

MINNESOTA: Duluth Intermodal Project

MISSISSIPPI: Multimodal Capital Improvement Program

NEVADA: Las Vegas Interstate 15 Corridor

NEW YORK: Kew Gardens Interchange Reconstruction

OHIO: Ohio Heartland Corridor

OREGON: Interstate 5 Southern Oregon Truck Climbing Lanes
Interstate 84 Troutdale Interchange
Interstate 5 Kuebler Boulevard Interchange
U.S. 26 Brookwood Interchange

PENNSYLVANIA: Crescent Corridor

RHODE ISLAND: Route 6/Route 10 Interchange – Providence
I-95/route 4 Interchange
I-95 between Route 6/10 and Route 146 Interchanges

SOUTH DAKOTA: Interstate 90 Corridor Preservation Project

TENNESSEE: Crescent Corridor Intermodal Freight Project

TEXAS: Rail Projects
Interstate 35
Interstate 10
Ports-to-Plains
La Entrada al Pacifico
Freight Shuttle System

UTAH: Interstate 15 Truck Parking Needs

VIRGINIA: Rail Enhancement Fund Projects

WASHINGTON: Columbia River Crossing

WISCONSIN: Interstate 39/90 Corridor
Interstates 94/894 & U.S. 45 Zoo Interchange
Interstate 94 North/South Corridor
U.S. 41

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