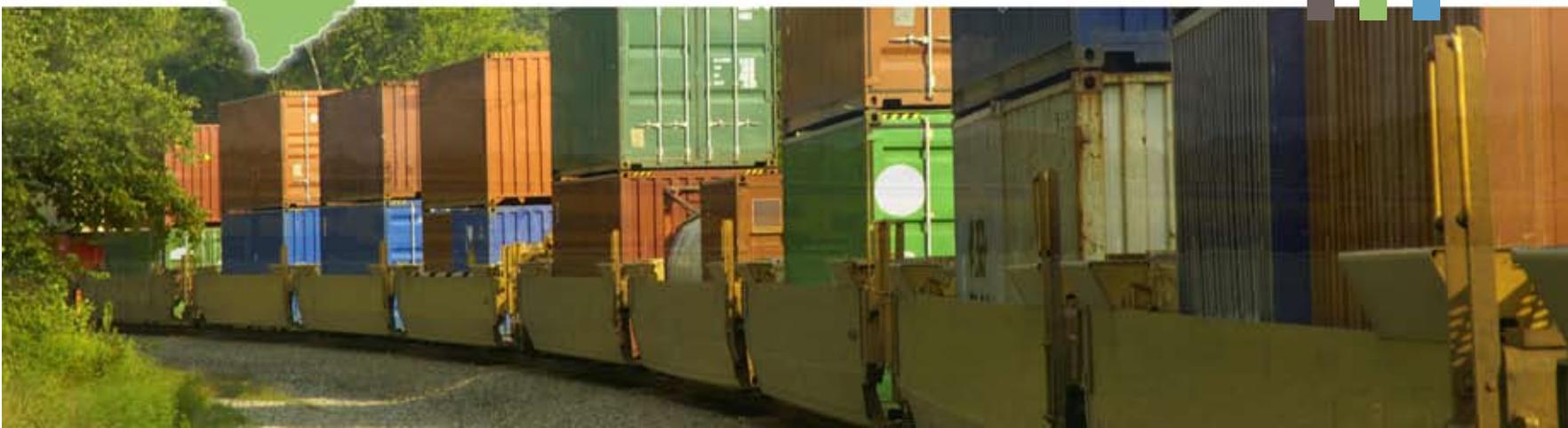


SOUTH CAROLINA STATE RAIL PLAN 2008 UPDATE

MARCH 2009



PREPARED FOR:
SOUTH CAROLINA DEPARTMENT OF COMMERCE



EXECUTIVE SUMMARY

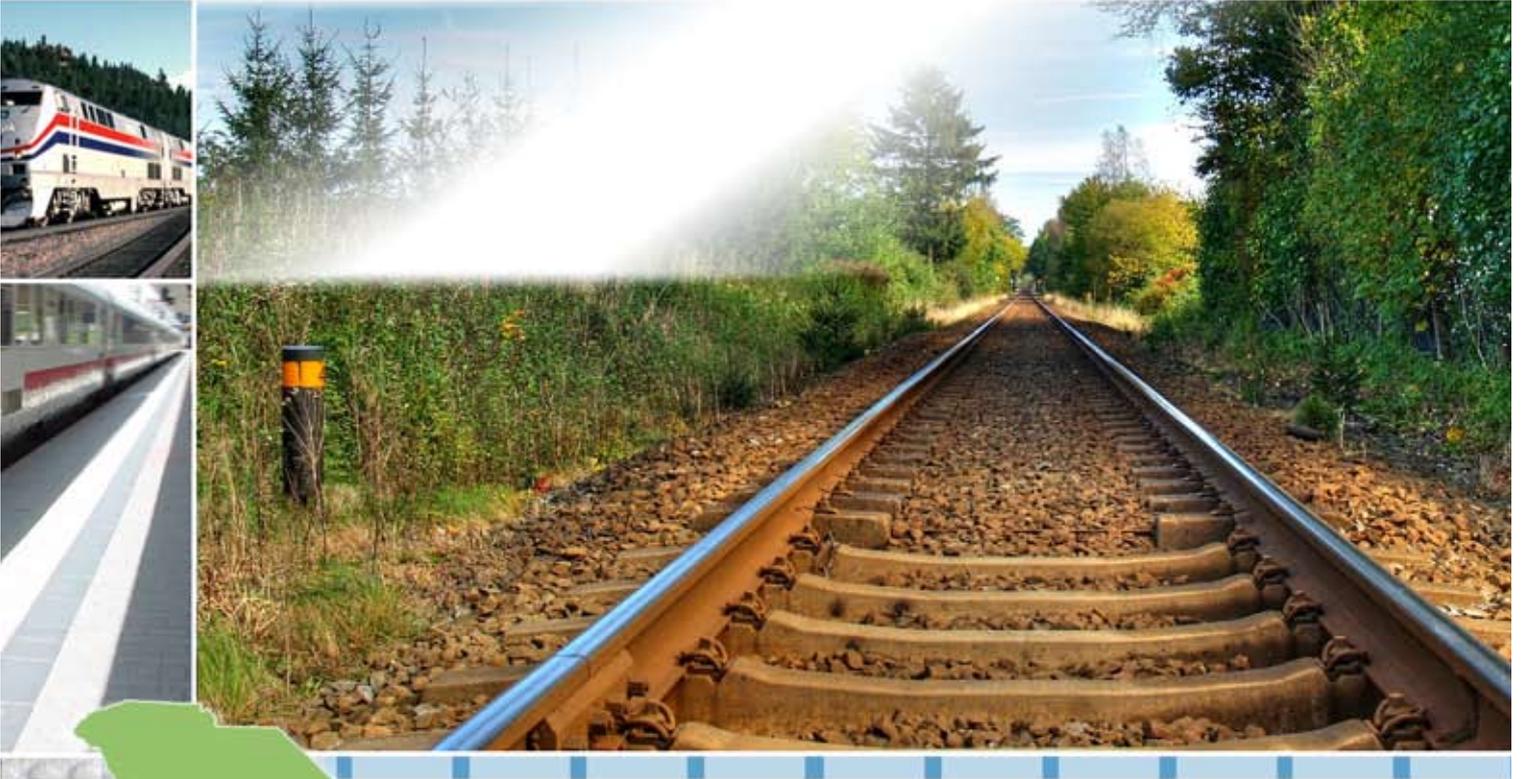


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LIST OF ACRONYMS AND ABBREVIATIONS

AAR	Association of American Railroads
AASHTO	American Association of State Transportation and Highway Officials
ACL	Atlanta Coast Line Railroad
ADT/AADT	Average Daily Traffic/Annual Average Daily Traffic
BAA	Broad Agency Announcement
BCDCOG	Berkeley-Charleston-Dorchester Council of Governments
BRT	Bus Rapid Transit
CALA	Carolina Southern Railroad Company
CARTA	Charleston Area Regional Transit Authority
CMAQ	Congestion Mitigation and Air Quality
CNC	Charleston Naval Complex
COFC	Container on Flat Car
COG	Council of Governments
CSX	CSX Corporation
CSXI	CSX Intermodal
CSXT	CSX Transportation
CTC	Centralized Traffic Control
DHEC	Department for Health and Environmental Control
DMT	Division of Mass Transit
ECBR	East Cooper and Berkeley Railroad
EDA	Economic Development Administration
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FAF	Freight Analysis Framework
FEU	Forty-Foot Equivalent Unit
FHWA	Federal Highway Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
FTE	Full-time-equivalent
GAO	U.S. Government Accountability Office
GARVEE	Grant Anticipation Revenue Vehicle
GDP	Gross domestic product
GRLW	Greenville and Western Railway Company
GSP	Gross-state-product
HB	Hampton and Branchville Railroad Company
HOV/HOT	High Occupancy Vehicle / High Occupancy Toll
IDEA	The Innovations Deserving Exploratory Analysis
ISTEA	Intermodal Surface Transportation Efficiency Act
LC	Lancaster and Chester Railway Company
LDL	Light Density Line
LOS	Level of service
LRFA	Local Rail Freight Assistance Program
LRSA	Local Rail Service Assistance Act

MAROps	Mid-Atlantic Rail Operations Study
MGTM/M	Million Gross Ton-miles per Mile
MOU	Memorandum of Understanding
MPO	Metropolitan Planning Organization
NEROps	Northeast Rail Operations Study
NHS	National Highway System
NIT	Norfolk International Terminals
NS	Norfolk Southern Railway
OPSP	Open Project Selection Process
ORS	South Carolina Office of Regulatory Staff
PDRR	Pee Dee River Railway Corporation
PICK	Pickens Railroad Company
PKHP	Pickens Railroad, Honea Path Division
PPP	Public-Private Partnership
PRWG	Passenger Rail Working Group
PTC	Positive Train Control System
PTR	Port Terminal Railroad
PUCC	Port Utilities Commission of Charleston
RO-RO	Roll-on/roll-off
ROW	Right of Way
RRIF	Rail Rehabilitation and Improvement Financing
SAL	Seaboard Air Line Railroad
SCDOT	South Carolina Department of Transportation
SCL	Seaboard Coast Line Railroad
SCRF	South Carolina Central Railroad Company, Inc.
SCPR	South Carolina Public Railways
SCSPA	South Carolina State Port Authority
SEHSR	Southeast High-Speed Rail
SEROps	Southeast Rail Operations Study
SIB	State Infrastructure Bank
STB	Surface Transportation Board
STCC	Standard Transportation Commodity Classification
STIP/TIP	State Transportation Improvement Plan/ Transportation Improvement Plan
TCS	Train Control System
TCSP	Transportation and Community and System Preservation
TEA-21	Transportation Equity Act for the 21 st Century
TEU	Twenty-Foot Equivalent Unit
TIFIA	Transportation Infrastructure Finance and Innovation Act
TOFC	Trailer on Flat Car
ULSD	Ultra low sulfur diesel
USDA	United States Department of Agriculture
USDOT	United States Department of Transportation
VIP	Virginia Inland Port Authority
VMT	Vehicle-miles of Travel
VPA	Virginia Port Authority



South Carolina State Rail Plan 2008 Update

ES-1. Executive Summary

The South Carolina State Rail Plan 2008 Update has been prepared for the South Carolina Public Railways, a Division of the South Carolina Department of Commerce. This Plan complies with the requirements set forth by the SCPR and is much broader in scope than previous State Rail Plans based on prior federal funding programs. The Passenger Rail Investment and Improvement Act of 2008¹, which became law during the course of this study (October 2008), established a new set of Rail Plan requirements, which are met in part, but not in whole in this document.

¹ H.R. 2095, The rail safety and Amtrak funding authorization bill, signed on October 16, 2008.

ES-2. Existing South Carolina Rail System

ES-2.1. State Agency Responsibilities

There are currently three state agencies in South Carolina that have a direct involvement with the railroads:

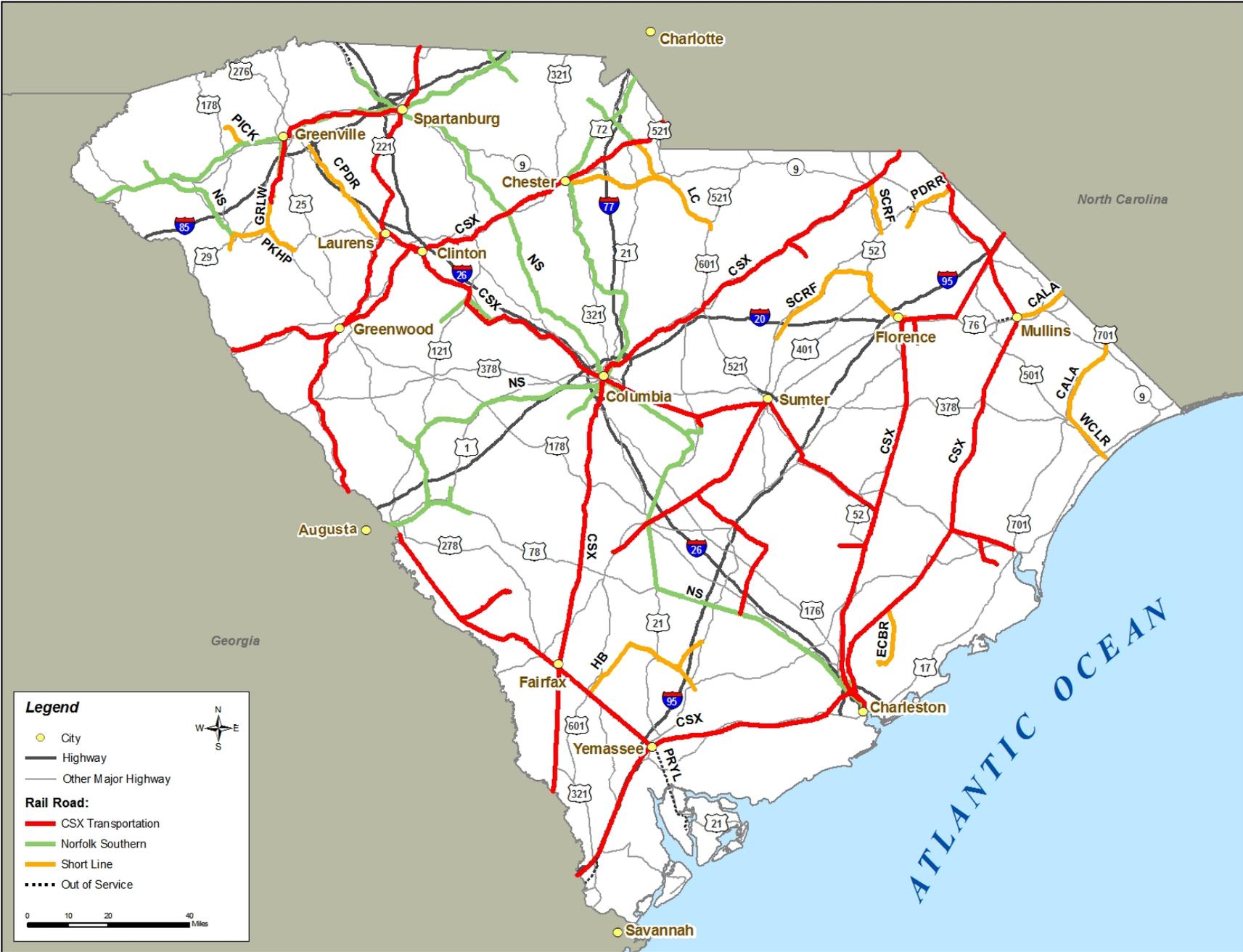
- Department of Commerce
 - Works with all the state’s rail carriers to attract new business to the state
 - Home to the Division of Public Railways (SCPR)
 - Operates three common carrier railroads in the Charleston area
 - Provides technical assistance and consulting services to South Carolina’s governmental bodies
- Department of Transportation
 - The Traffic Safety Division manages federal funds for highway-rail grade crossing improvements
 - The Right-of-Way Division is responsible for crossings involved in construction projects, at-grade or grade-separated
 - The Division of Mass Transit (DMT) is charged to “develop and coordinate a general mass transit program and policy for the State...” and is designated as the agency principally responsible for preserving railroad rights-of-way for future use, and coordinating rail passenger service and high-speed rail planning and development
 - The Planning Division collaborates with the Mass Transit Division in rail passenger matters
- Office of Regulatory Staff (ORS) is responsible for railroad and natural gas pipeline safety oversight. Railroad safety falls under the Transportation Division of the ORS

ES-2.2. State Rail System

Freight Rail System – The South Carolina rail system, as depicted in **Exhibit ES-1**, is operated by 11 rail carriers ranging in size from small intrastate railroads to members of large rail systems serving the entire eastern U.S. Of the line-haul railroads, two are Class I carriers² and the remainder are Class III carriers or terminal companies. These railroads comprise a 2007 state rail system of 2,258 miles. CSX Transportation's (CSXT) 1,249 South Carolina route miles represent 55 percent of the statewide rail system. The Norfolk Southern Railway (NS), with 679 route miles, is the second largest carrier in terms of mileage accounting for 30 percent of the state rail system. The Class III carriers comprise the remaining 15 percent of the system.

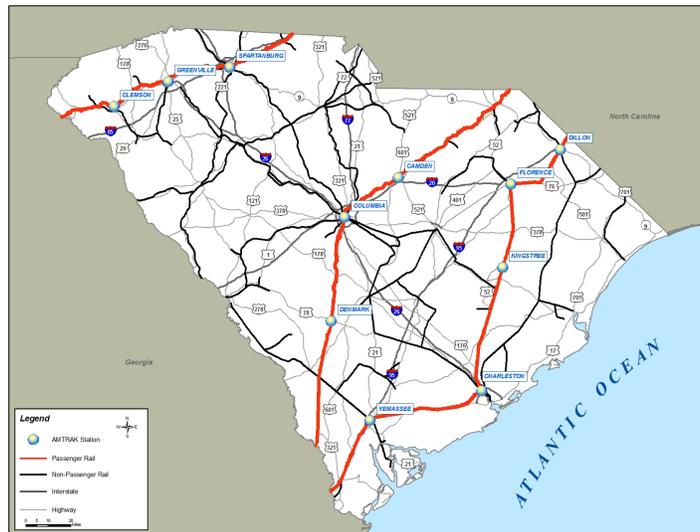
²As of December 2006, Class I railroads have annual gross revenues of \$346.8 million or more. Class III carriers have annual gross revenues less than \$28 million. These limits are updated annually to reflect inflation.

Exhibit ES-1: State Rail Map



Passenger Rail System – Existing rail passenger service is provided by Amtrak. South Carolina is fortunate when compared to some states in that it has four trains operating over three routes all owned by freight railroads (one NS, two CSXT) all of which connect the South with the Northeast. Amtrak’s South Carolina service consists of the following four daily trains:

- Silver Star – New York/Tampa/Miami via Columbia
- Silver Meteor – New York/ Miami via Charleston
- Palmetto – New York/Savannah via Charleston
- Crescent – New York/New Orleans via Greenville

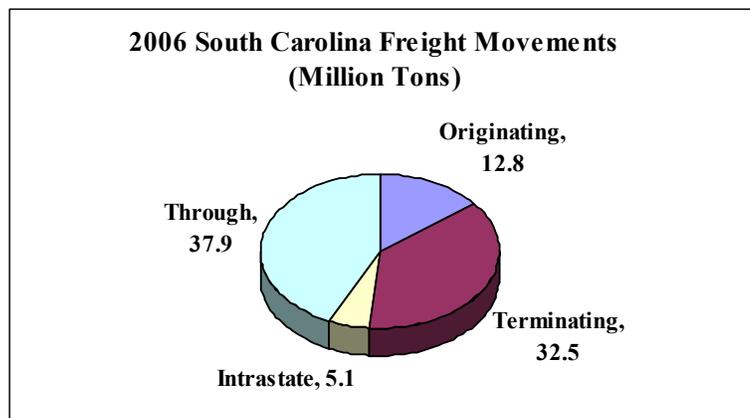


Amtrak ridership in South Carolina in 2007 totaled 209,000 passengers.

ES-2.3. Rail Freight Traffic and Flows

Commodities Transported – A total of 50.5 million tons³ of rail traffic originated or terminated in South Carolina in 2006. The traffic statistics are dominated by coal, accounting for 34 percent of total originating and terminating tonnage. In a distant second place are chemicals or allied products with 8.7 percent. In addition, there was 37.9 million tons of rail traffic that passed through South Carolina with neither origins nor destinations in the state. Coal and chemical products are the principal through commodities, accounting for approximately one-third of total through tonnage.

Traffic Patterns – Major destinations of freight originating in South Carolina, included Georgia, North Carolina and Florida with over one million tons each. Ohio, Tennessee, Pennsylvania, and Virginia were the next largest with over 500,000 tons each. Major origins of freight terminating in the state included Kentucky, North Carolina, Pennsylvania and Tennessee in that order. Kentucky, largely coal, was by far the largest with over 12 million tons or over one-third of the total. Interstate freight tonnage terminating in the state in 2006 was 2.5 times the originating tonnage. Originations of freight tonnage terminating in the state are shown in **Exhibit ES-2**.



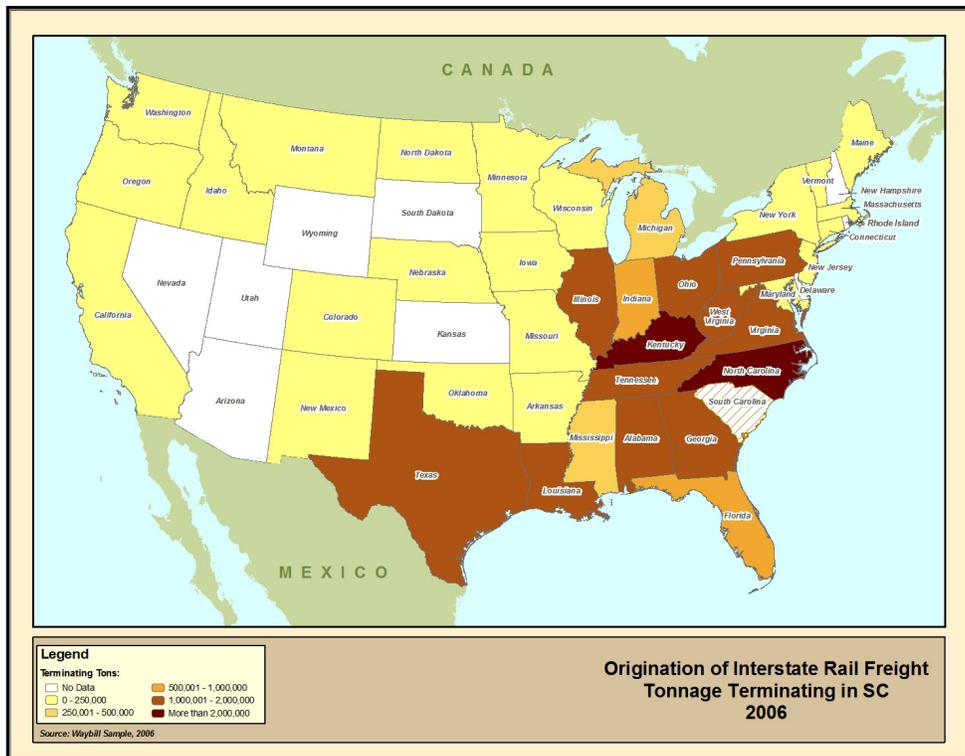
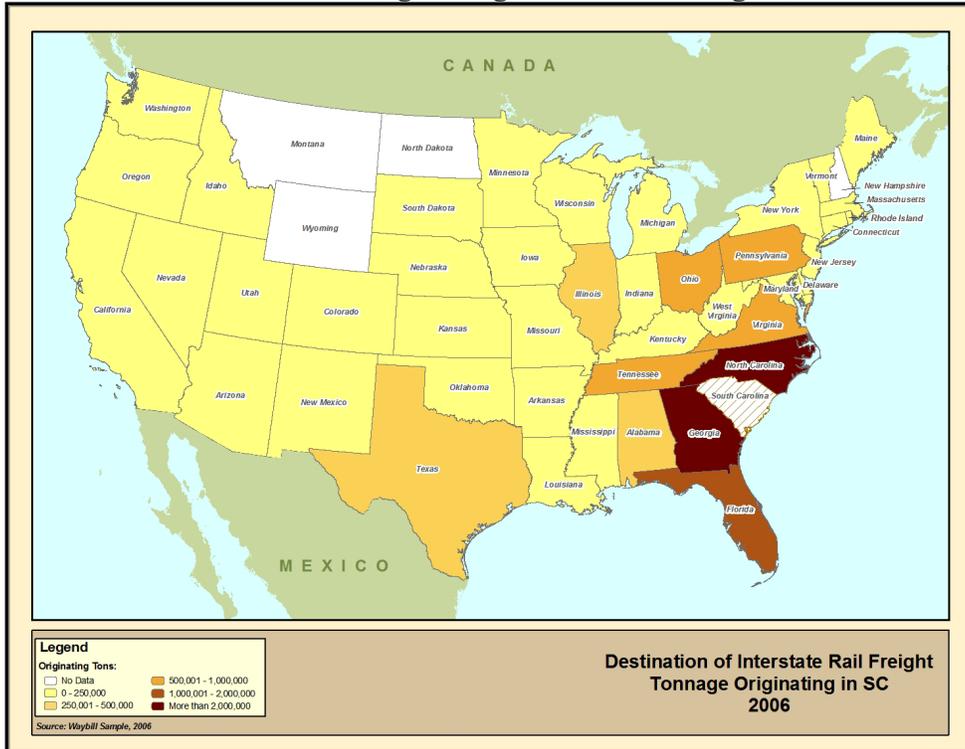
³ 2006 STB Carload Waybill Sample

ES-2.4. Intermodal Connectivity

“Intermodal” refers to an approach to planning, building and operating a multimodal transportation system that optimizes use of the strengths of each mode and the connections between modes. The benefits of an efficient intermodal transportation system can be numerous offering the promise of lowering transportation costs, increasing economic productivity, reducing congestion, , improving mobility of all sectors of the population, and reducing energy consumption and mitigating environmental impacts.

There are a multitude of rail-related intermodal movements involving transfers of freight between water and rail and truck and rail. Facilities to perform these transfers between transportation modes are located throughout the state.

Exhibit ES-2: South Carolina Originating and Terminating Rail Traffic Tonnage



ES-2.5. Rail-Related Economic Impacts in South Carolina

Economic impacts generated by the state’s railroads include the annual employment, labor income (earnings), value added, economic output, and taxes associated with the public and private firms that provide rail service in South Carolina, as well as the firms that use rail to transport goods and materials.

Economic Impact Findings – The South Carolina Rail System affects an estimated 339,700 jobs across the state. The vast majority of the impacts arise from businesses that use rail transportation, although, 7,000 (2%) jobs, are directly and indirectly attributable to rail operations. These rail-operation and rail-user impacts include the direct and multiplier (i.e., indirect and induced) impacts associated with those firms that handle freight and rail-related services. The 339,700 jobs account for \$15.4 billion paid in income and output of \$56.8 billion. These impact summaries by type, measure, and category are summarized in **Exhibit ES-3**.

Exhibit ES-3: Rail-Related Impact Summary – 2007

Impact Type and Measure	Impact Category		
	Operation	Users	Total
Direct			
Output ¹	\$505	\$31,031	\$31,537
Value Added ¹	\$299	\$10,580	\$10,879
Labor Income ¹	\$171	\$6,011	\$6,182
Employment	2,000	104,300	106,300
Multiplier			
Output ¹	\$495	\$24,766	\$25,261
Value Added ¹	\$299	\$14,129	\$14,428
Labor Income ¹	\$196	\$8,996	\$9,193
Employment	5,000	228,400	232,500
Total			
Output ¹	\$1,000	\$55,798	\$56,798
Value Added ¹	\$599	\$24,709	\$25,308
Labor Income ¹	\$368	\$15,007	\$15,375
Employment	7,000	332,700	339,700

Source: Wilbur Smith Associates

Note: (1) \$Millions

Conclusions on Rail-Related Economic Impacts – The economic analysis clearly demonstrates that rail activities and services provide a vital role in South Carolina’s economy. The associated employment, income, output, and tax impacts span all industries and reach every region of the state:

In terms of employment, the 339,700 rail-related jobs represent 14.2 percent of the 2.4 million jobs statewide.

The \$15.4 billion earned by these employees represents 17.8 percent of South Carolina's total income.

The tax impacts associated with rail-related activities totals an estimated \$2.5 billion annually.

The combined value-added impact, \$25.3 billion, associated with the rail operations and rail users represents 16.6 percent of the state's gross state product (GSP).

While it would be erroneous to conclude that all of these impacts are entirely and solely dependent on rail, the findings do suggest that rail service facilitates business for a wide range of economic activities throughout the state. Increasingly, the globalization of trade and manufacturing require dependable and efficient access to transport facilities. Significantly, rail transport provided by the various railroads provides cost and/or logistical advantages to South Carolina firms that enable the state to compete efficiently in the global market place.

ES-3. Issues and Opportunities

ES-3.1. Rail Capacity Requirements

The recent growth (prior to late 2008) of rail traffic has resulted in mainline capacity problems. Much of the system capacity was reduced during prior lean years leaving the system poorly prepared to handle today's traffic levels.

Capacity Studies – A number of recent studies and freight corridor initiatives have been undertaken or developed to address the issue. The **Southeast Rail Operations Study (SEROps)**, sponsored by the I-95 Coalition and the Departments of Transportation in four Southeastern States, namely North Carolina, South Carolina, Georgia, and Florida⁴ is ongoing. A September 2007 study of rail capacity on a national basis was performed by the **Association of American Railroads (AAR)**. This assessment of long-term capacity needs of the rail industry requested by the National Surface Transportation Policy and Revenue Study Commission was based on satisfying the U.S. DOT's projected rail freight demand for 2035. Based on current traffic flows and line segment use characteristics, all of South Carolina's study system components (principal rail lines designated by the railroads) were rated to have excess capacity. When projected 2035 demands were compared to existing corridor capacities, level-of-service ratings for two segments of CSXT's Savannah-Spartanburg route in South Carolina deteriorated – one to near-capacity and the other to at-capacity. These assessments did not, however, consider future rail passenger use of the lines.

Freight Corridor Initiatives – Both Class I railroads have proposals for the development of long-distant corridors, most developed essentially for intermodal traffic, but serving to improve operations for all rail movements. Several of the corridors run through South Carolina.

In 2007, CSXT submitted an application to the U.S. DOT requesting the 1,200-mile-long *I-95 Rail Corridor* be designated a Corridor of the Future. Additional main tracks were recommended, especially in existing single-track locations in the corridor segments passing through South Carolina for future freight and passenger traffic levels, but no specific recommendations were made. However, specific projects in the corridor were submitted by CSXT for inclusion in this Rail Plan between Dillon to Charleston. These projects primarily consisted of extension of double track sections and creation of universal crossovers⁵ in both the extensions and in existing double-track sections of the corridor. Eleven locations were proposed.

In May of 2008, CSX Corporation announced the *National Gateway* initiative to create a \$724 million public-private corridor project linking Mid-Atlantic Ports and the Midwest. While the Corridor initiative does not use any of South Carolina's rail lines, it is part of the carrier's I-95 Corridor and could be used as a conduit for South Carolina intermodal traffic bound for the Midwest.

Norfolk Southern's *Crescent Corridor* took root in the railroad's proposal initiated in Virginia to alleviate truck traffic on I-81. Originally presented as an improved route through east Tennessee

⁴ With assistance from Cambridge Systematics

⁵ Permits crossing from either track to the other in either direction in double-track sections provide flexibility for meeting and passing trains, which increases capacity.

and western Virginia, the corridor as now proposed has two legs. One leg consists of the carrier's Atlanta-Manassas, Virginia main track, which traverses South Carolina's Upstate. The corridor connects the east-west rail gateways of New Orleans and Memphis with the Northeast. No specific corridor projects have been identified in South Carolina as of yet.

Intercity Rail Passenger Proposals – There are three active proposals involving intercity passenger rail service that involve South Carolina.

Southeast High Speed Rail Corridor – In 2001, a study⁶ examined the two routes through South Carolina (from Charlotte to Atlanta through Greenville and from Raleigh to Savannah through Columbia) both passing through Richmond connecting to the Northeast Corridor in Washington. It was concluded that the top speed was in excess of the characteristics of either route and significant improvements would have to be made to both routes. A 1997 ridership study⁷ revealed the Upstate route held the most promise from a travel demand standpoint and the focus of the effort is now directed at the Upstate Route.

A current study conducted by Volpe was predicated upon development of a dedicated track⁸ for the service rather than use of existing freight trackage. A dedicated track was selected for reasons of safety, reliability, and maintenance, as well as operating and access control. Demand and associated revenue along with capital, maintenance and operating costs were developed for each scenario. The study concluded that the “best case” scenario is either 125 or 150 mph diesel-power⁹ trains with total capital costs of \$2.06 to \$2.52 billion with revenue-cost break-even in 2031 or 2032. Next steps include a more detailed ridership study, further investigation into the best operating speed-ridership-construction cost scenario, and to obtain funding for environmental studies.

The Passenger Rail Working Group – The Passenger Rail Working Group was established by the National Surface Transportation Policy and Revenue Study Commission (section 1909 SAFETEA-LU). The Group was charged with developing a vision for intercity passenger rail through 2050 including costs, a funding program, and a governance structure. The group's proposed intercity passenger rail network in South Carolina for 2015 and 2030 consists of the current Amtrak routes. The 2050 system remains the same with the exception of proposed operations of 79-110 mph¹⁰ passenger trains on a separate track along the current Amtrak route through the Upstate.

Rail Passenger Commuter Corridors – Commuter rail or rail-transit efforts have been investigated in five different areas of the state, primarily in urban regions. As a result of the investigations, proposals are being advanced in two communities, Charleston and Columbia.

Summary of Capacity Requirements – While the indications are that the state's rail system in general is currently capable of handling anticipated rail freight volumes, many of the principal

⁶ South Carolina Southeast High Speed Rail Corridor Improvement Study

⁷ Southeast High Speed Rail Market and Demand Study

⁸ Two tracks for electrified service

⁹ Technology to meet U.S. safety standards will have to be developed and speeds in this range require grade separation of highway crossings.

¹⁰ Association of American Railroads (AAR) policy specifies separate tracks for freight and passenger service with passenger train speeds of 90 mph or greater.

system components are also the subject of various passenger proposals that will increase capacity needs if implemented. Also the various freight corridor initiatives could result in unanticipated increases in demand due to traffic being re-directed to the corridors as a result of improved operations, or increased business resulting from related service improvements.

Exhibit ES-4 depicts the routes that are impacted by the various service plans and initiatives discussed above. The accumulation of all proposals on the state's rail system would have a significant impact on several of its components, principally its three north-south main tracks. All three are the subject of the respective owner's public-private partnership freight corridor initiatives, intercity and commuter rail proposals.

While the passenger proposals for the NS main track in the Upstate will involve separate "higher-speed" trackage, all of the others would place demands on existing alignments. The PRWG conventional Amtrak-type intercity proposals would involve existing Amtrak routes, but presumably with more frequent service as demand from increasing populations and energy/environmental considerations grow. Superimpose commuter rail proposals with rush-hour demands and it becomes evident that significant needs for additional rail capacity will result. **The capacity needs will then translate to public finance needs.**

ES-3.2. Rail to Port Opportunities

Opportunities to Relieve Highway Congestion – Vehicular traffic resulting in roadway congestion, safety concerns, and air quality degradation is of particular concern, especially in urban areas. Concerns in South Carolina's water port communities, especially Charleston, are well documented and have existed for some time. It was a major issue for the SCSA's planned expansion into a new terminal on the Charleston Naval Complex (CNC) in North Charleston.

To place the Charleston congestion issue in perspective, the SCDOT Planning Office estimated the 2005 cost of delay on the statewide highway system at \$345 million. Almost 1/3 of this total, \$110 million occurred in the Charleston area (MPO and COG). The only other area close to this amount was the Grand Strand at \$97 million. The state's other two metro areas, Columbia and Greenville-Spartanburg, accumulated delay costs of \$38 million and \$36 million, respectively.¹¹

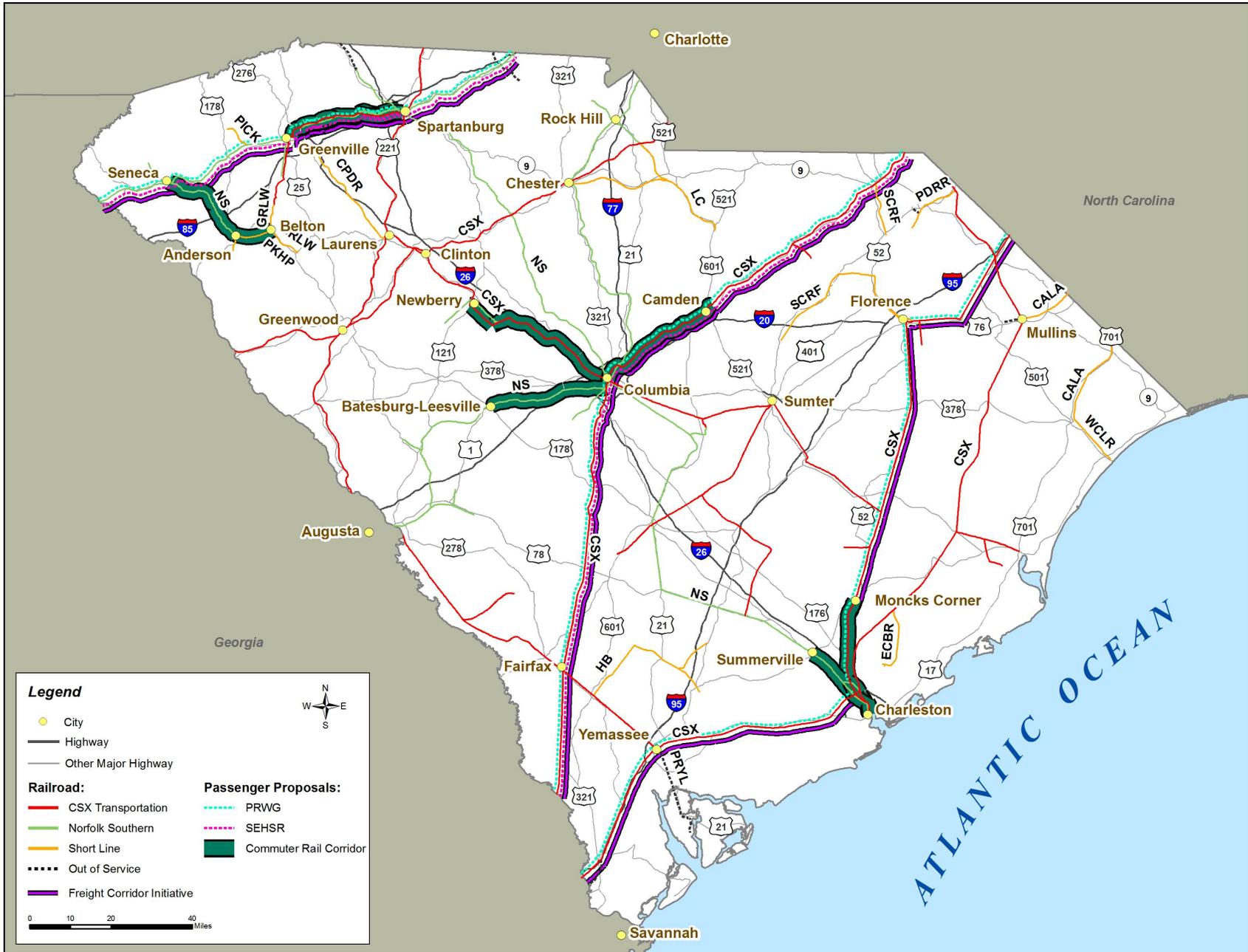
Charleston Highway Traffic Volumes – According to the CHATS Long Range Transportation Plan, most of I-26 will be failing before 2030. Projected levels of service on port-related truck routes reveal continuous stretches with LOS of E or F as vehicles traffic volumes grow. Widening needs are forecasted by SCDOT (2030) for all of the area's interstate highway system¹² and studies have been performed of widening several other segments. However, only those portions of I-26 from the U.S. 52 Connector to I-526 and I-526 from SC 7 to S-97 (Long Point Road) are expected to be funded over the next 20 years.

A number of other approaches have been considered, including HOV/HO T (**High Occupancy Vehicle/High Occupancy Toll**) lanes on I-26 between Summerville and downtown Charleston. Commuter rail and rail-served inland port investigations have also been prompted because of the I-26 congestion issue. No one solution has been found and a combination of approaches including staggered work hours, van and car pooling etc. are going to be required.

¹¹ Executive Summary, *2008 South Carolina Comprehensive Multimodal Long-Range Transportation Plan*, p.6.

¹² Ibid, p.8.

Exhibit ES-4: Freight and Passenger Rail Corridor Initiatives



Charleston Portside Intermodal Facilities – One of the largest, if not the largest, rail issues in South Carolina concerns Class I service to the Port of Charleston. Concerns exist related to both container and non-container traffic. Rail service at the Port received poor ratings in availability, capacity, quality and service levels (the only “needs improvement” overall) from shipper’s perspectives in the recently completed *SC Transportation Cost Competitive Analysis Report*¹³ prepared for the South Carolina Public Railways.

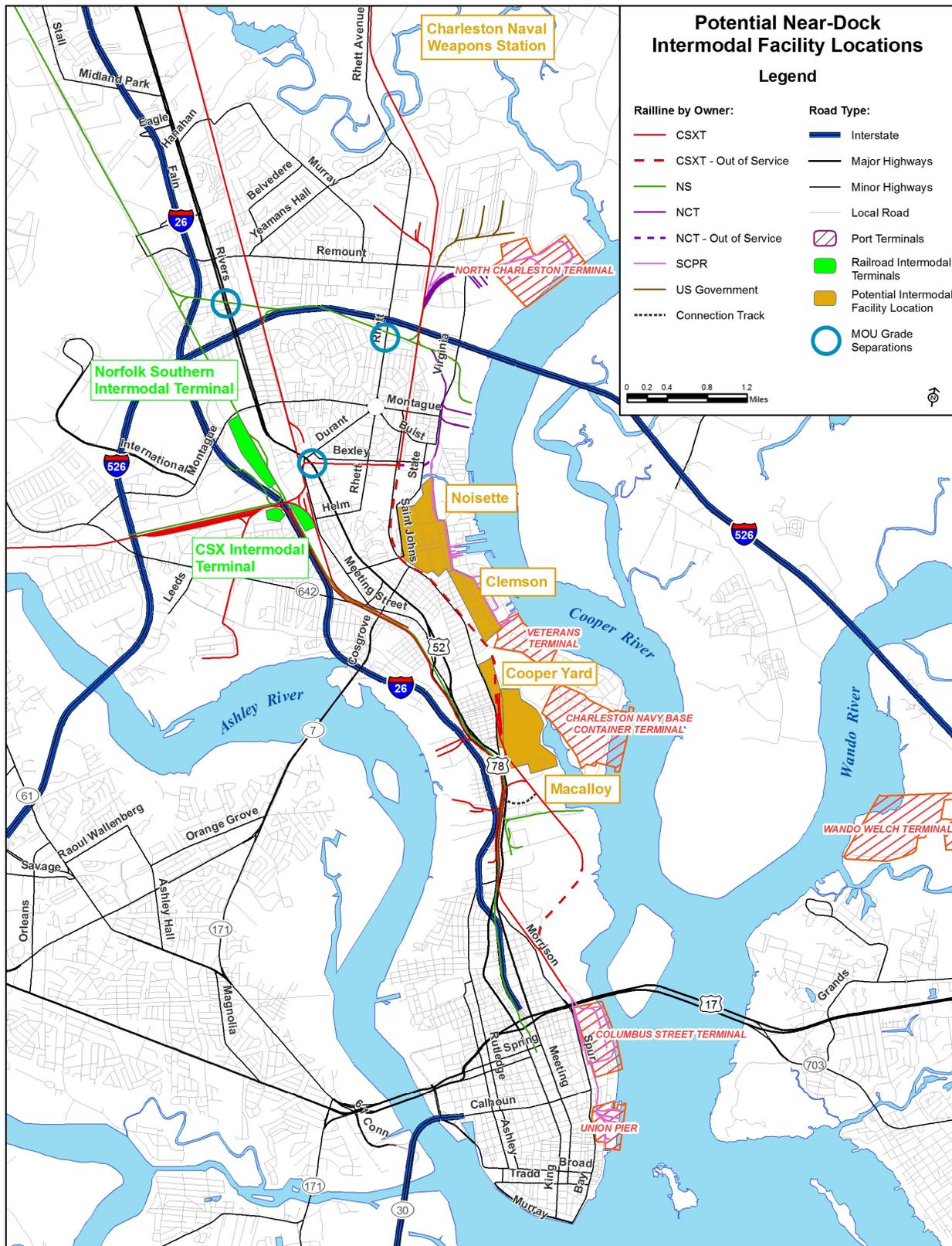
Two means of improving rail intermodal service were investigated, on-dock and near -dock intermodal facilities. These approaches have the potential to eliminate or reduce the now required dray between the port terminals, which add cost to movements in and out of the Port and adds traffic to area highways.

Two of the Port’s container terminals are rail-served and some 5,000 empty containers have been handled at Columbus Street in the last couple of years, but no loaded containers have been handled at either in the last two years. The Port’s largest container terminal, Wando Welch located on the east side of the Wando River, is not rail served and is 11 miles from the nearest rail line. The new Navy Base Container Terminal, although not located directly on rail, can be made rail accessible, but on-dock rail is not planned for the facility. In reality, the Port is constrained in terms of terminal space and does not have room to accommodate on-dock rail facilities of any size without seriously impacting marine container handling needs.

Near-dock intermodal is hampered by a lack of available property near the Port’s mainland container terminals, which are all located in developed areas. The only properties with promise are those undergoing redevelopment or reuse. These properties are identified in **Exhibit ES-5**. Access by both railroads also places limitations on site availability and / or use due to rail line ownership and the terms of the MOU between the City of North Charleston and the SCSPA as it pertains to rail access to port facilities.

¹³ Tompkins Associates, Global Insight, pp 24,25

Exhibit ES-5: Potential Near-Dock Intermodal Sites



Of the near-dock sites reviewed, the Cooper Yard-Macalloy site holds the most promise as it is clearly available and could function like an on-dock facility. However, a means of developing the terminal without negatively impacting the port access road permit and construction of the port terminal itself must be employed. In October, 2002, a Memorandum of Understanding (MOU) and agreement was executed between the SCSPA and the City of North Charleston that, among other items, included provisions for both highway and rail access to minimize impacts on the local roadways and quality of life of the residents.

And so, the **Port Access Road** to the Navy Base Container Terminal was born. It has been planned and funded. The Environmental Impact Statement was drafted and approved in 2007. Reinforcing the MOU, the terminal permit contains a special condition (m) requiring the access roadway be in service prior to the CNC terminal commencing operations. The road will connect the planned terminal directly with I-26 replacing existing Exits 218A and 218B near the border of Charleston and North Charleston.

The second choice would be the Clemson site on the CNC as it has some potential to function similar to an on-dock terminal but availability and rail access issues have to be resolved.

The Noisette site on the CNC would be the third choice as it is most likely too far removed from the Navy Base Container Terminal to possess any potential to function as on-dock, but it has more room for future expansion than the Clemson site. However, it too has the same availability and rail access issues as the Clemson site.

Continued pursuit of all of the options is necessary, however, as more than one site is likely to be required, one for each Class I railroad, and the sites discussed are the last even remotely close to the port terminals once the capacity of the existing railroad intermodal terminals is exceeded. Alternative sites will result in excessive dray distances to remote locations that will increase truck miles on the area roadway system, especially I-26.

Port Non-Intermodal Rail Capabilities – Breakbulk cargoes in the Charleston port area have not increased significantly in recent years and are expected to decline over the next year or so. Over the long term, however, cargoes are expected to increase. Neither rail capacity nor port capacity for non-containerized cargo is expected to be a significant issue, at least in the short term. Of more pressing concern is competitive access to Veterans Terminal.

Proposed Port in Jasper County – The Jasper Ocean Terminal Joint Project Office was created by the Intergovernmental Agreement that was signed in November of 2007 by the states of South Carolina and Georgia. It has a six member board, three from each state, charged with conducting the organizational and management groundwork for the port.

The proposed Ocean Terminal in Jasper County is located on 1,400 acres on the northeast side of the Savannah River. Currently, no highway infrastructure exists between the port terminal site and other area highways such as I-95. Representatives from South Carolina and Georgia State Departments of Transportation have made preliminary assumptions and plans for highway access to the planned terminal. Collectively, it is agreed that the planned Jasper Port Terminal presents a unique opportunity to plan infrastructure in a comprehensive manner ahead of port construction to manage anticipated growth rather than reactionary planning and construction after the terminal becomes active.

The Port site is not currently rail served either. There is, however, a former CSXT branch line, its Hutchinson Island Lead, approximately 5 miles away. The branch, now inactive, connects with the railroad's "A" line just south of Hardeeville and runs to Hutchinson Island on the Savannah River. A likely extension of this line would follow proposed new roadways to the site such that the necessary right of way could be acquired along with that for the roadways. The existing branch will need significant rehabilitation. The Port site, however, is most likely to be directly served only by CSXT.

ES-3.3. Other Issues Affecting Rail Traffic

Public Concerns – At-grade crossings of railroads and roadways result in a number of problems for both the rail carriers and the motoring public. Foremost is safety with delays to motorists and noise from locomotive horn warnings the most common concerns from a public viewpoint. Safety, liability, maintenance and other costs are concerns for the railroads. Grade crossing issues are the downside of the increased use of rail transportation and the related disbenefits have to be considered. In addition, solutions to grade crossing problems, especially involving urban grade separations, are expensive and thus create significant long-term funding needs.

Shipper Concerns – Rail users in the state have a variety of concerns regarding the rail industry. Most of the problems have at least partial solutions in truly competitive rail service. As the number of railroads operating in the country has declined through bankruptcies and mergers, so has competition as many areas have been left with only one railroad limiting transportation competition to other freight-transporting modes. The concern over competitive service has led to a number of proposals that would essentially "re-regulate" the railroads. The U.S. Government Accountability Office (GAO) has prepared several reports on the freight railroad industry and one in 2006 recommended that the Surface Transportation Board (STB) conduct a "rigorous analysis" of the state of competition nationwide. The study completed in 2008¹⁴ concluded that "incremental policies such as reciprocal switching and terminal agreements have a greater likelihood of resolving shipper concerns via competitive response, and have a lower risk of leading to adverse changes in industry structure, costs and operations."

Freight Railroad Concerns – The largest issue the freight railroads have with the State of South Carolina is a lack of support for the industry. While many states have active rail programs designed and funded to preserve and improve the rail system within their boundaries and its service to businesses and citizens, South Carolina does not.

The state did participate in the federal rail freight programs LRSA and LRFA in the 1980s and 1990s. The state's participation was managed first by the Public Service Commission and then by the SCPR on behalf of the Governor's office until federal funding ceased. On the passenger side, there has been participation by the SCDOT's Department of Mass Transit in the efforts related to the Southeast High Speed Rail Corridor, Southeast Rail Operations Study, and several of the commuter rail proposals. However, a comprehensive freight and passenger rail program is yet to be developed.

¹⁴ Lauritis R. Christensen Associates, *A Study of Competition in the U.S. Freight Railroad Industry and Analysis of Proposals that Might Enhance Competition*, prepared for the Surface Transportation Board, November 2008

ES-4. Proposed Direction and Next Steps

ES-4.1. Rail Project Funding Needs and Sources

Rail Project Funding Needs – Several rail projects described in State Rail Plan 2008 Update will either require or will be the subject of requests for public funding. Those that are active or most likely to be advanced are discussed in the following paragraphs.

Short Lines – Needs of the state’s short line rail carriers for capacity, rehabilitation and safety projects totaled statewide to \$134 million.

Southeast High Speed Rail Corridor – Route costs for the Upstate line are estimated in a report from U.S. DOT’s Volpe Center at \$1.2 to \$1.4 billion.¹⁵ Based on 80 percent federal funding and half of the route lying in South Carolina, the state’s share would be approximately \$140 million.

Commuter Rail – Charleston has applied to the State Infrastructure Bank for \$206 million for capital costs. An active investigation of service between Columbia and Camden is ongoing. Capital costs were estimated at \$80 million in a prior study.

Class I Railroad Corridor Initiatives – The Class I Corridor initiatives have been presented as public-private partnerships and following the model used in preceding projects, the state will be targeted as a public partner. CSX Transportation identified specific projects in the state, but NS did not. However, replacement of the second track removed in part on the NS main track through the Upstate will most likely be the designated improvement. Costs for these initiatives could approach \$500 million or more with the state’s share one-third or \$165 million.

Charleston Intermodal – It is likely the state will become involved in funding some approach to improvement of rail intermodal service in Charleston. While an approach has yet to be formulated, based on the options presented in this report, total costs will probably be in excess of \$200 million. The public share of the costs is yet to be determined.

Columbia’s Assembly Street Grade Separation Project – Several alternatives have been developed for this railroad consolidation and improvement project. Estimated costs range from a low of \$23 million to a high of \$87 million with the most likely implementable alternative in the middle of the range.

Existing Federal Rail Financial Assistance Programs – A number of federal agencies administer transportation programs from which rail financial assistance is available for states, including:

- Federal Railroad Administration (FRA) Programs
- Federal Highway Administration (FHWA) Programs
- Federal Transit Administration (FTA)
- U.S. Department of Transportation (USDOT)
- U.S. Department of Commerce
- U.S. Department of Agriculture (USDA)

¹⁵ Preliminary estimate and does not include equipment nor operating costs.

- Environmental Protection Agency (EPA)

Also, the **Emergency Economic Stabilization Act of 2008**, signed by the President on October 3, 2008, extended the tax credits through December 31, 2009, and also made qualified railroad track maintenance expenditures made anytime during 2008 eligible for tax credits. The program provides a 50 percent tax credit for infrastructure rehabilitation on Class II and III railroads, up to a cap of \$3,500 per year per track mile owned.

Most recently, on February 17, 2009, the **American Recovery and Reinvestment Act of 2009** was signed into law. This legislation makes available \$789 billion to spur an economic recovery. The bill includes \$507 billion in spending programs and \$282 billion in tax relief. Included in the spending programs is \$46 billion for transportation projects. Transportation-related funding includes \$27 billion for highway and bridge construction and repair; \$8.4 billion for mass transit; \$8 billion for construction of high-speed railways and \$1.3 billion for Amtrak.

With regard to rail-related eligibility, there are two specific state grant programs for intercity rail passenger service. A total of \$250 million is available for projects that improve the safety and reliability of intercity passenger trains. Specific projects must be on a Statewide Transportation Improvement Plan at the time of application to qualify. A total of \$2 billion is also available for grants related to high-speed rail corridor program projects.

Although there are no separate programs provided for freight rail projects, its eligibility is specifically noted in various USDOT programs. The Office of the Secretary's supplemental discretionary grants for a national surface transportation system provides \$5.5 billion for eligible projects including passenger and freight rail transportation projects and port infrastructure investments, including projects that connect ports to other modes of transportation and improve the efficiency of freight transportation. These eligibility criteria are also included under the supplemental grants for highway investment.

Prospective Federal Rail Assistance Programs – The significant increase in both domestic and international freight movements over the past two decades and the projections that the amount of freight will double over the next 20 years has resulted in significant discussion of how freight capacity can be increased to accommodate these increased freight levels. The recently released report *Transportation for Tomorrow* by the National Surface Transportation Policy and Revenue Commission calls for significant changes in the way national transportation needs are addressed in the future. Specifically it calls for new program areas to better meet the nation's economic reliance on transportation. Suggested new program areas that could be associated with the rail mode include:

- Asset Management;
- Freight Transportation;
- Congestion Relief-Metropolitan Mobility;
- Safe Mobility;
- Access to Small Cities and Rural Areas; and
- Intercity Rail Passenger.

Federal funding of these recommended programs would be based on individual plans developed by each state and metropolitan area, as well as those developed by multi-state coalitions.

Existing Sources of State and Local Rail Financial Assistance – The Department of Commerce administers a Grant Program for infrastructure improvements that is tied to job creation. The types of eligible projects include land purchase and infrastructure improvement, such as roads, water, sewer, rail, etc.

The **South Carolina Transportation Infrastructure Bank** continues to be nationally recognized as the largest and most active State Infrastructure Bank in the country, and has been named in Federal Highway Publications as a national model for the way progressive states can build and fund transportation infrastructure. The South Carolina Transportation Infrastructure Bank was created in 1997 by the General Assembly¹⁶. The legislation stated that:

*“The corporate **purpose** of the bank is to select and assist in **financing major qualified projects** by providing loans and other financial assistance to government units and private entities for constructing and improving **highway and transportation facilities necessary for public purposes** including economic development.”*

The Department of Parks, Recreation and Tourism administers the **Recreational Trails Program**. This program is a Federal-aid assistance program designed to help states provide and maintain recreational trails for both motorized and non-motorized recreational trail use. The conversion of abandoned rail corridors to recreational uses would be eligible for funding by this grant program, although the program is not limited to abandoned rail corridors. The minimum grant application amount is \$10,000 and the maximum is \$100,000.

Potential Sources of State and Local Rail Financial Assistance – The lack of substantial federal rail assistance programs and the need for states to address outstanding highway needs with programs for which rail projects are eligible has required those states that have active rail assistance programs to develop programs from substantially state resources. The types and criteria of these programs, as well as the funding sources, vary widely from state to state. Programs used by these states include:

- State Infrastructure Grant Programs
- State Rail Infrastructure Loan Programs
- State Rail intercity Passenger Assistance Programs
- State Rail Commuter Programs
- State Rail Industrial Access/Economic Development Programs

In recent years private railroad companies have taken the initiative to recommend public-private partnerships for large-scale projects that provide significant benefits to the public as well as the railroads. These projects have typically required financial contributions from the federal government, states, local communities and the railroads. South Carolina rail lines are involved in several PPPs as discussed.

¹⁶ SC Code Section 11-43-110.

ES-4.2. Policy Options to Enhance Rail-Related Economic Development

South Carolina's rail system is an essential element in its efforts to enhance transportation-related economic development. In simple terms, rail-related economic development objectives are:

- Supporting and promoting economic activity by preserving and improving the rail system, thereby increasing the availability and attractiveness of rail transportation;
- Identifying, preserving and developing rail-served industrial sites;
- Identifying means to increase the use of rail transportation for both freight and passengers; and,
- Promoting rail alternatives where it will improve quality of life.

South Carolina's continuing investment in rail has been limited in the past to rail investments in economic development projects and rail preservation/improvement projects under past federal rail assistance programs. However, through carefully developed transportation policies, cooperative arrangements, and strategic investments, South Carolina can ensure that its rail system will better contribute toward achieving its economic development objectives. The objectives can be met by first strengthening the rail program in general and then addressing specific economic development actions.

ES-4.3. Next Steps

The State Rail Plan 2008 Update has identified a number of rail issues in South Carolina involving both the public and the rail carriers. Several of the issues concerning rail capacity and rail passenger service can be addressed in part with state participation in the Passenger Rail Investment and Improvement Act of 2008, which became public law on October 16, 2008 after this rail plan effort, had been initiated. Participation in the various railroad corridor initiatives offers further opportunities. Public benefits in terms of mitigation of roadway congestion, safety, maintenance and capital investment, improvement of mobility, and economic development can result. Many other issues will need to be addressed through local or state initiatives. Taken in order of urgency and necessity in the South Carolina context, it is recommended the following steps be taken.

Funding – Of paramount importance is program funding. Considerations include:

Rail Passenger and Railroad Capacity Projects - Compliance with the State Rail Plan requirements contained in the Passenger Rail Investment and Improvement Act of 2008 is necessary to obtain capital investment grants for rail passenger service and railroad congestion contained in the same legislation. The projected rail funding needs attributed to these projects contained in this plan will take some time to fully develop, providing an opportunity to meet the provisions for the new State Rail Plan requirements.

Intermodal Projects - Funding needs for intermodal projects associated with the Port of Charleston are also imminent as discussed, but public investment needs are dependent on the alternative(s) to be implemented and operating party(s) involved.

Short Line Needs - Short line needs, however, are current, in many cases immediate, and are not likely to qualify for grants available under the new 2008 Act. They require much less investment for individual projects than those associated with passenger Class I mainline projects and most can be made ready for implementation in a very short period of time. Existing programs, federal and state should be examined for applicability and availability to address these needs.

Rail Program Organization – A coordinated effort is also going to be needed to meet the provisions for a State Rail Plan, established in the Passenger Rail Investment and Improvement Act of 2008, and to obtain funding provided in that legislation. The new requirements for a State Rail Plan require, among others, that:

- “A State Rail Transportation Authority” be established or designated to “prepare, maintain, coordinate and administer the plan”; and
- “A State rail plan approval authority” be established or designated to approve the plan.

It is recommended that of the two agencies now involved in rail planning, the SCDOT be selected as the “State Rail Transportation Authority” for purposes of progressing the effort.

The “State Rail Plan Approval Authority” should be comprised of representatives of each agency involved in rail transportation. In the case of the SCDOT, it is suggested that planning and safety representatives be included.

It is also recommended that a rail advisory committee be established comprised of stakeholders - representatives from the railroad industry, the users of rail service, community and regional planners and other interested agencies such as the State Ports Authority. This body would function to advise the State Rail Transportation Authority during the rail plan process and function as a first line of review for proposals formulated.

Port of Charleston – Rail intermodal service in general, near-dock intermodal access for the new Navy Base Container Terminal, and dual rail service for Veterans Terminal comprise the elements of single largest current rail issue in the state for both rail service users and providers, namely service to the Port of Charleston. Several options are discussed in this report, none of which are without complications and implementation issues.

The intermodal terminals of the two Class I railroads in Charleston are near capacity and will not be able to absorb projected long-term growth in containers at the Port of Charleston. Both also lack room to expand in their current locations. Ideally, the rail terminals should be located as close as possible to the port terminals, but as revealed in the discussion of near-dock potentials, the availability of suitable sites is almost non-existent. Potential sites on both railroads are far removed from the port terminals that would result in long drays and would only serve to increase truck traffic on area highways.

As discussed earlier, of the near-dock sites reviewed, the Cooper Yard-Macalloy site holds the most promise as it is clearly available and could function like an on-dock facility. However, a means of developing the terminal without negatively impacting the port access road permit and construction of the port terminal itself must be employed. Continued pursuit of all of the options is necessary, however, as more than one site is likely to be required, and the sites identified in this report for new intermodal facilities are the last even remotely close to the port terminals once the capacity of the existing railroad intermodal terminals is exceeded.

It is also recommended that a market study be conducted of establishing intermodal rail service to the Upstate. While there is a large market base in the area, and significant public benefits could be generated with such a service, it is not clearly understood if there is enough interest on the part of the industries located in the area to make it feasible.

Rail Capacity – While no significant capacity problems were revealed to currently exist in South Carolina, the railroads do have corridor improvement initiatives running through the state, and regional and local rail passenger proposals will increase demand in the same corridors. The state should prepare to participate in these public-private partnership initiatives as well as both intercity and commuter rail services.

Competitive rail Service – Since the state no longer has rail regulatory authority since passage of the Stagger’s Rail Act, the only means it can influence competitive service is through federal legislative efforts and promoting dual access where available. Areas of the state with dual rail access potential have been identified in this study. It is recommended that industrial sites in these areas be identified and protected.

Railroad Support – Once the State Rail Transportation Authority is established, it is recommended as its first duty that it address “state policy involving freight and passenger rail transportation including commuter rail operations, in the state.” This is also a stated rail plan purpose.¹⁷ Today, a unified state rail policy does not exist but is desperately needed to guide planning and project participation including funding.

¹⁷ Section 22703 of the Passenger Rail Investment and Improvement Act of 2008.