Making The Business Case For Freight & Logistics

Project Development Advisory Committee

August 2010

Georgia Department of Transportation
Office of Planning

Task 2 - Making the Business Case for Freight

- **As agreed upon earlier, the themes for "Making the Business Case for Freight" were developed based on SSTP themes**
  - » **Theme 1 – Freight transportation assets have been critical to State's economic growth**
  - » **Theme 2 – Coasting on past successes**
  - » **Theme 3 – Economic competitiveness at stake**
  - » **Theme 4 – Renewed investment will yield significant returns**

Themes 1 and 2

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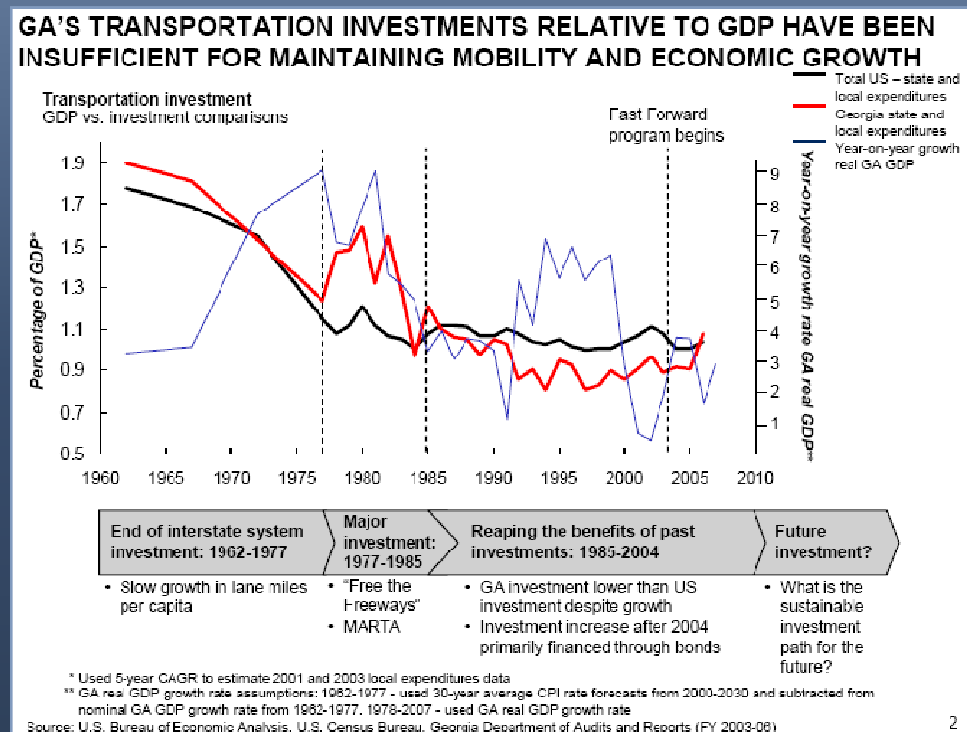
Historical Transportation Investment – GA and U.S.

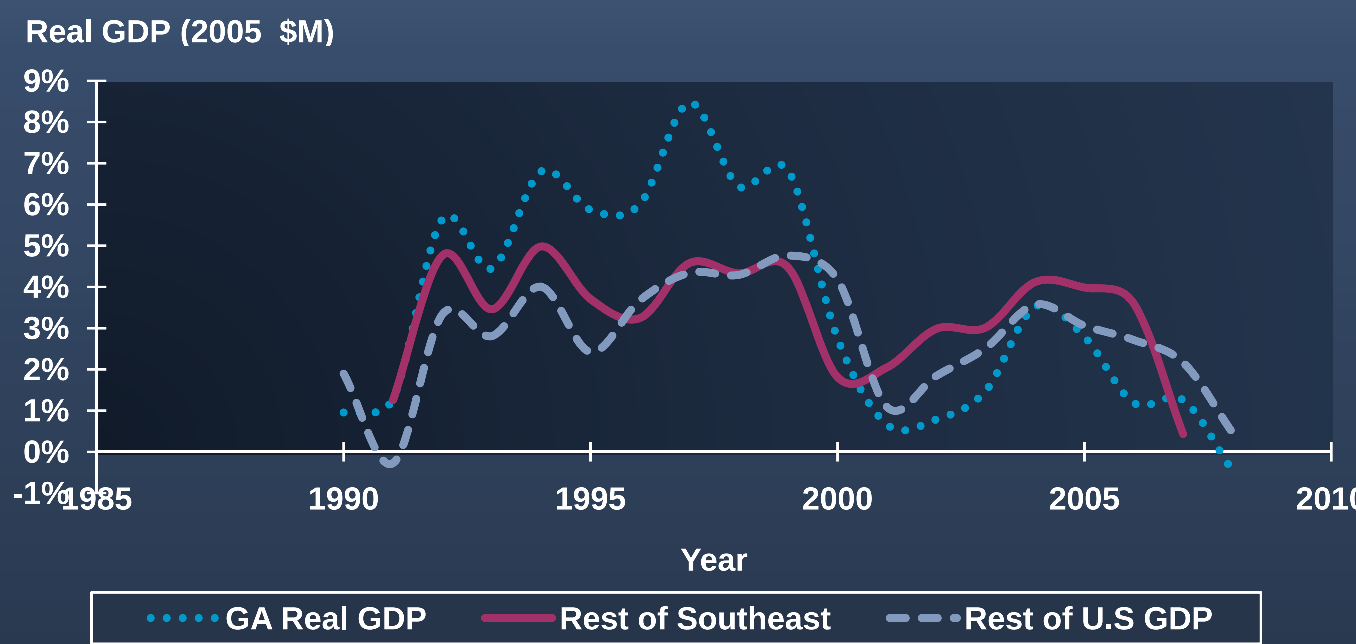
- **Georgia has decreased investment in transportation over the last 30 years**
  - **Invested more than average from 1977-1985**
  - **Invested less than average since 1985**
- **Leading to higher than average economic performance in the 1990s**



Source: GDOT Statewide Strategic Transportation Plan, 2010

Georgia Economic Performance
All Sectors

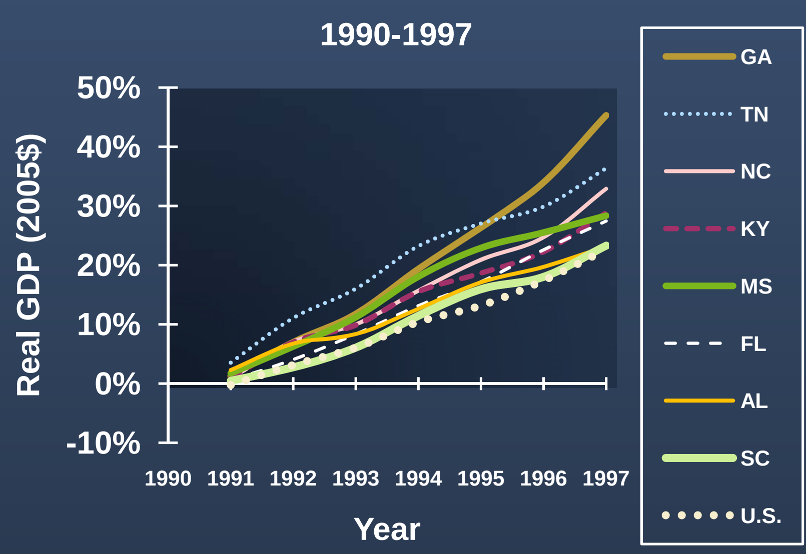
- **Georgia's economy outperformed the rest of the southeast and the U.S. in the 1990s**
- **Over the last decade, it has lagged behind both the southeast and the nation**

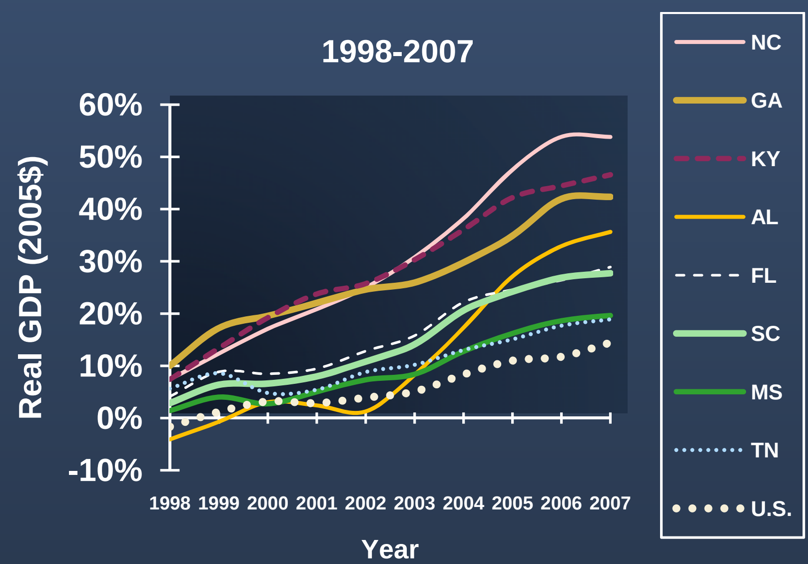


Source: BEA, Consultant Analysis

Georgia Economic Performance Relative to Other Southeast States

- **Georgia's economy outperformed all other states in the southeast from 1990 to 1997**
- **Georgia has recently fallen to the middle of the pack**
  - » **NC and FL have exhibited consistently strong economies**





Source: BEA, Consultant Analysis

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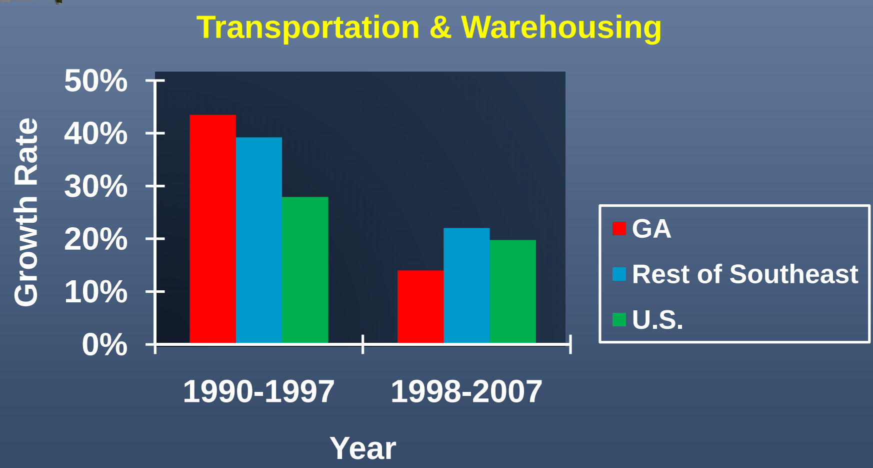
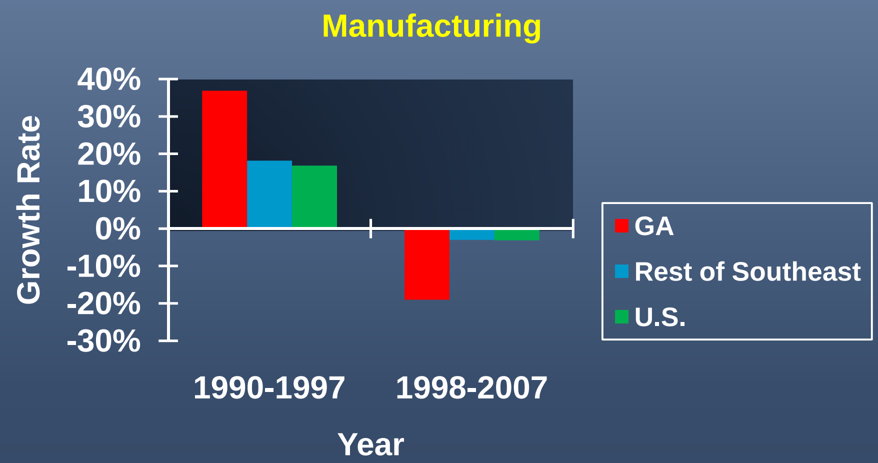
Georgia Moves From Leader to Laggard in Freight-Related Sectors

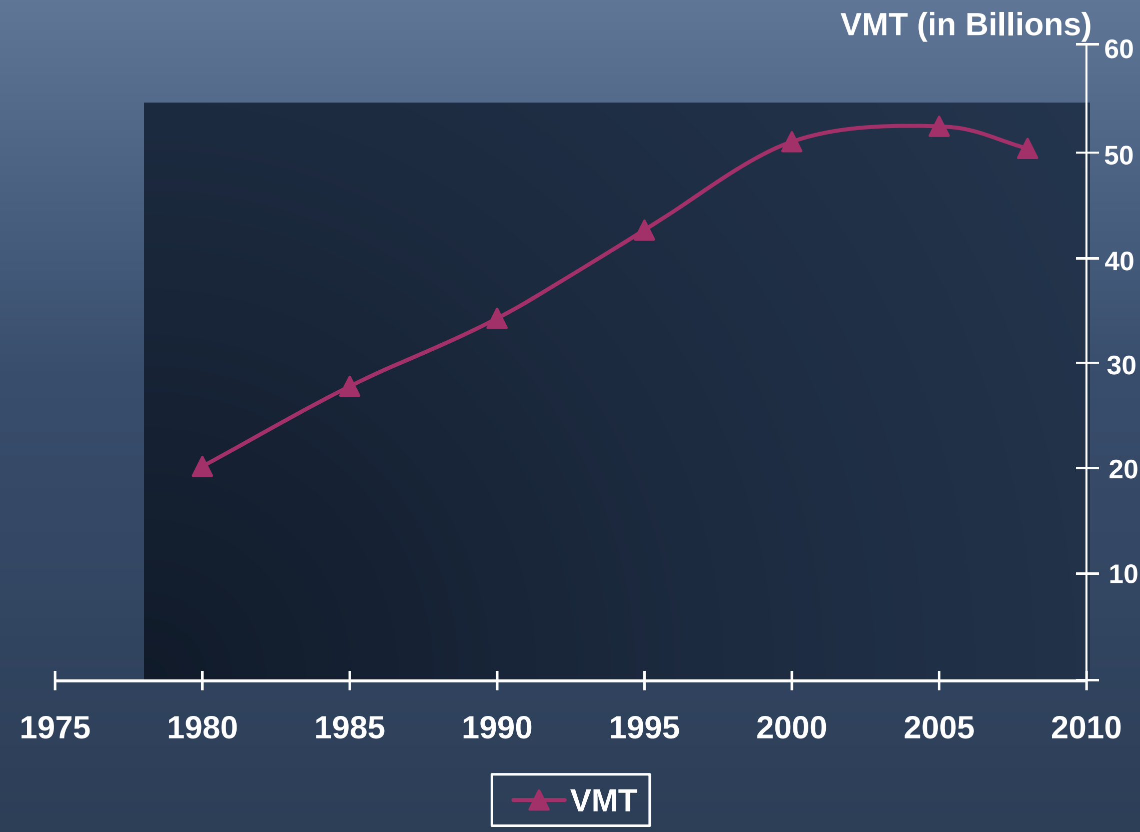




Source: BEA, Consultant Analysis

Historical Investment and Growth
Trucking

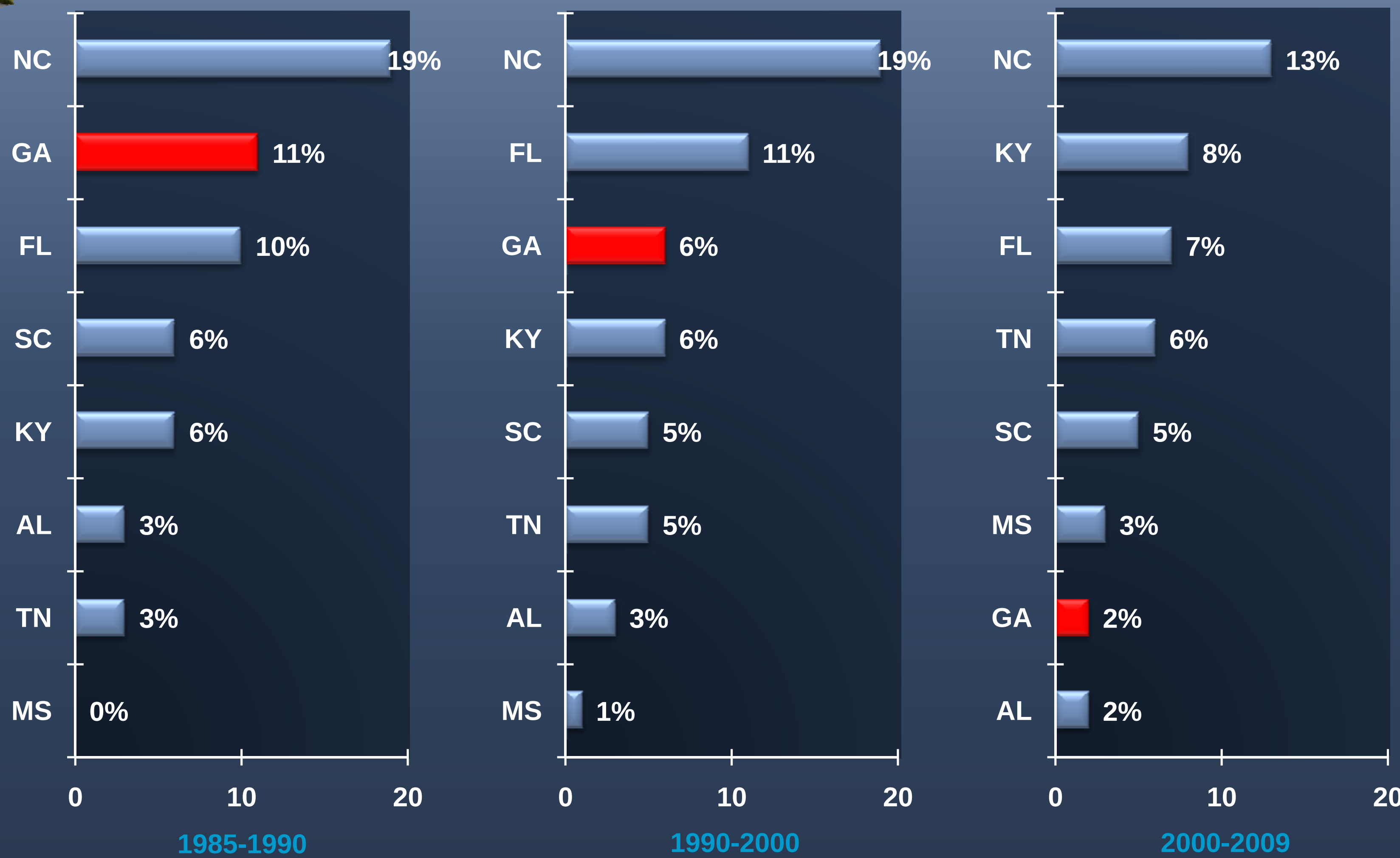
- 1978 to 1988 – "Free the Freeways"
  - » 1,100 lane miles of roads added to GA network
- Fast Forward
- Other
  - » I-95
  - » I-85 South Metro ATL
  - » I-75 South GA



* Includes Interstate, Other Freeway and Arterial Roads only

Source: FHWA Highway Statistics, Consultant Analysis

Growth in Southeast Lane Mileage for Interstates



Source: FHWA Highway Statistics, Consultant Analysis

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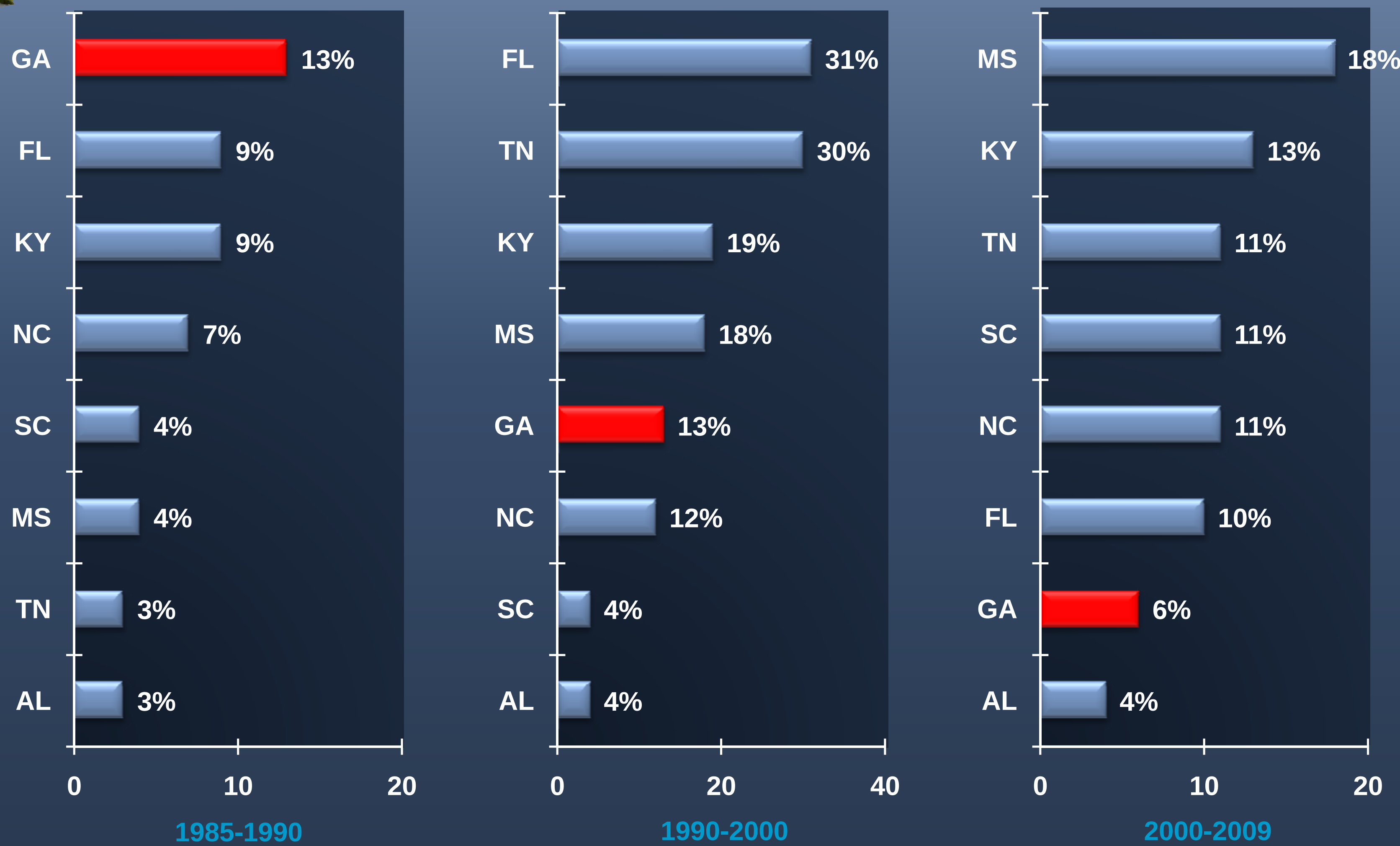
Growth in Southeast Lane Mileage for Interstates, Freeways, and Principal Arterials



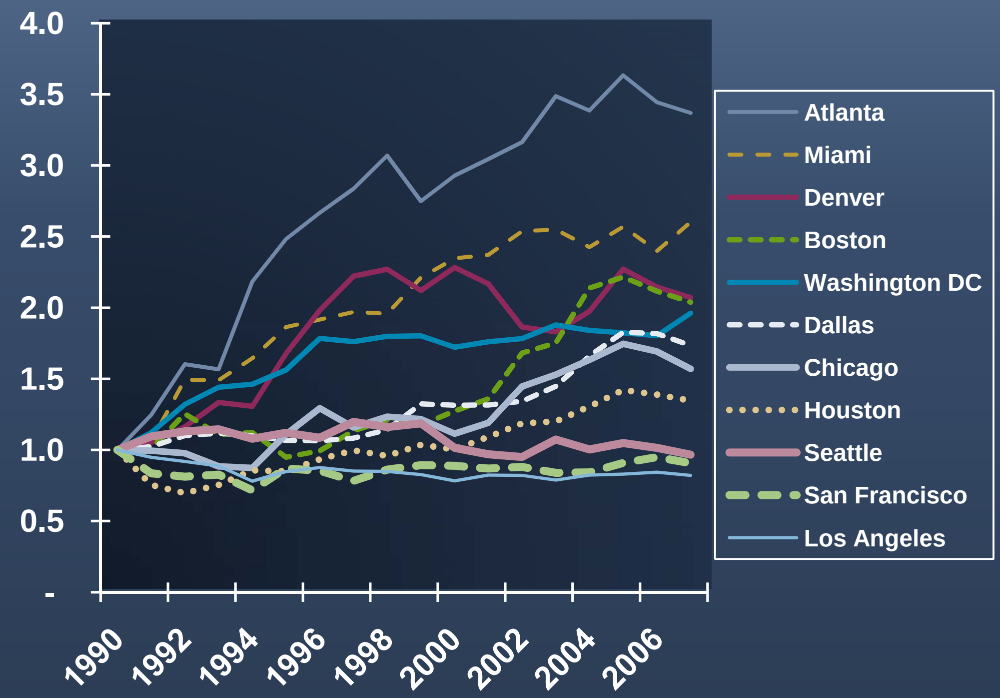
Source: FHWA Highway Statistics, Consultant Analysis

Under-Investment Has Led to High Congestion Levels

Atlanta has more congestion than any other "freight city" in the southeast

City	Freeway Delay per Commuter, 2008 (minutes)
Atlanta	26.5
Miami	17.7
Charlotte	14.7
Jacksonville	13.8
Memphis	11.4
Tampa	7.4
Charleston	4.6
New Orleans	4.1

Atlanta has the fastest growing congestion of all major metro areas since 1990



Freeway Delay per Commuter, Indexed to 1.0 in 1990

Source: TTI Urban Mobility Report, Consultant Analysis.

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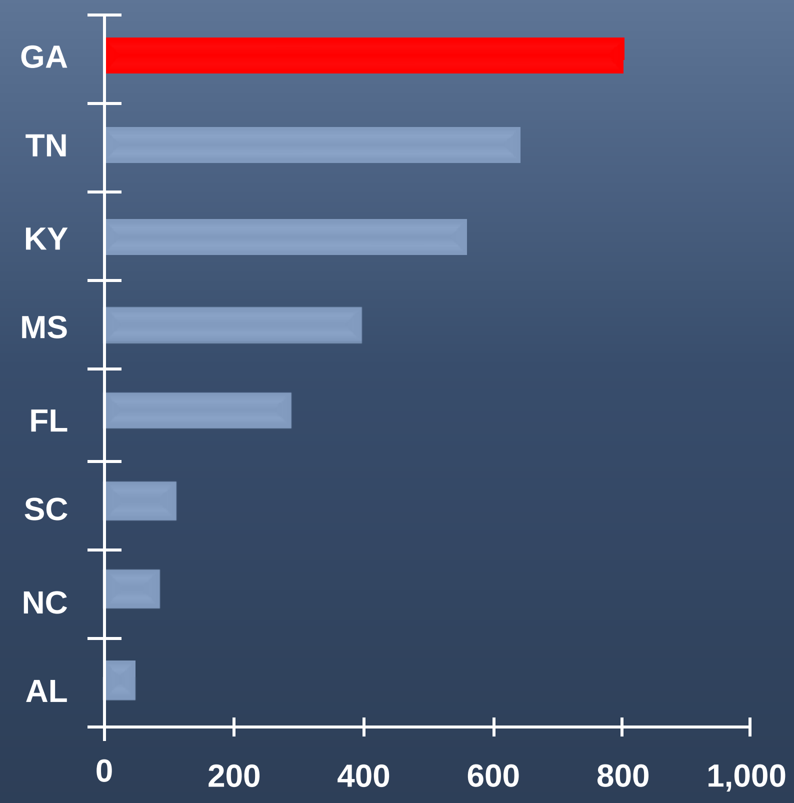
Historical Investment and Growth
Intermodal Rail

- Inman Yard IM capabilities expanded throughout 1980s
- CSX Hulsey Yard rearranged to an intermodal yard in the 1980s
- CSX Fairburn IM Yard opened in 1999
- NS Austell IM Yard opened in 2002



Source: FHWA Freight Analysis Framework.

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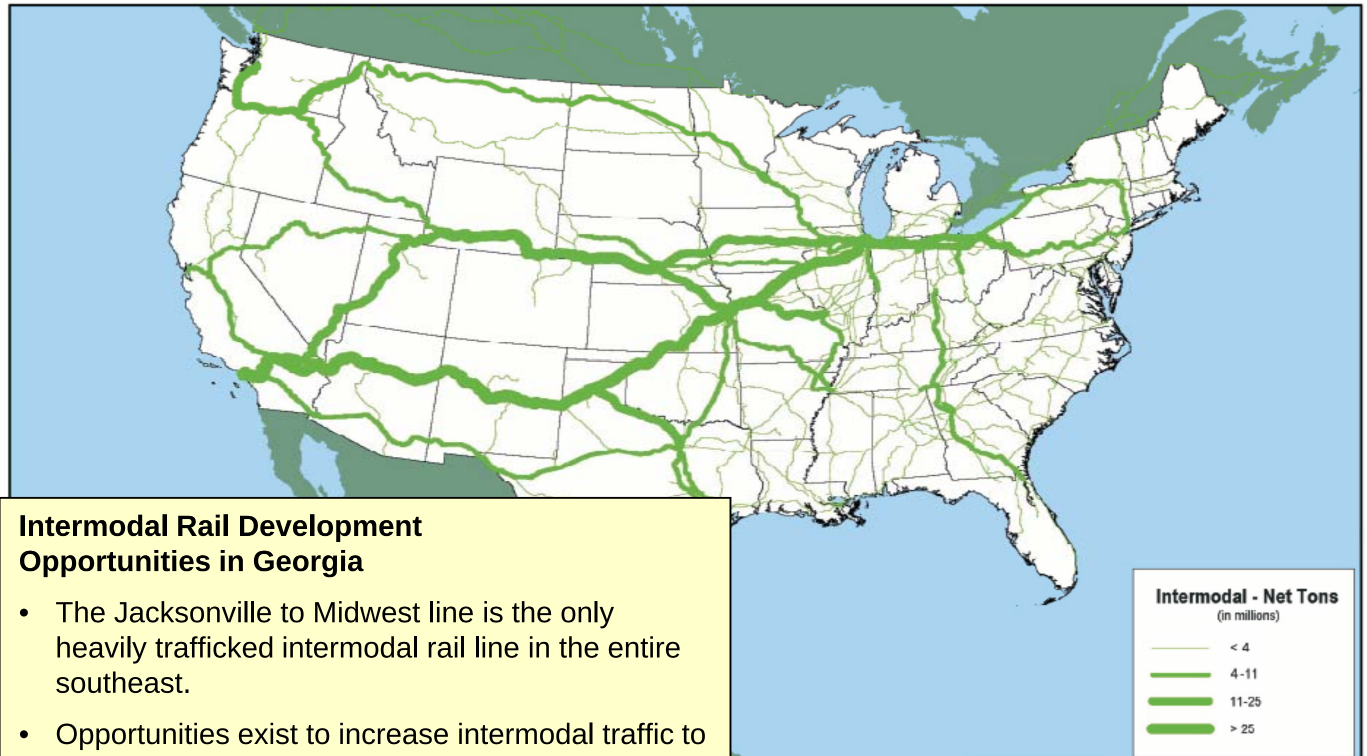
Southeast Intermodal Traffic is Relatively Low



Intermodal Rail Development Opportunities in Georgia

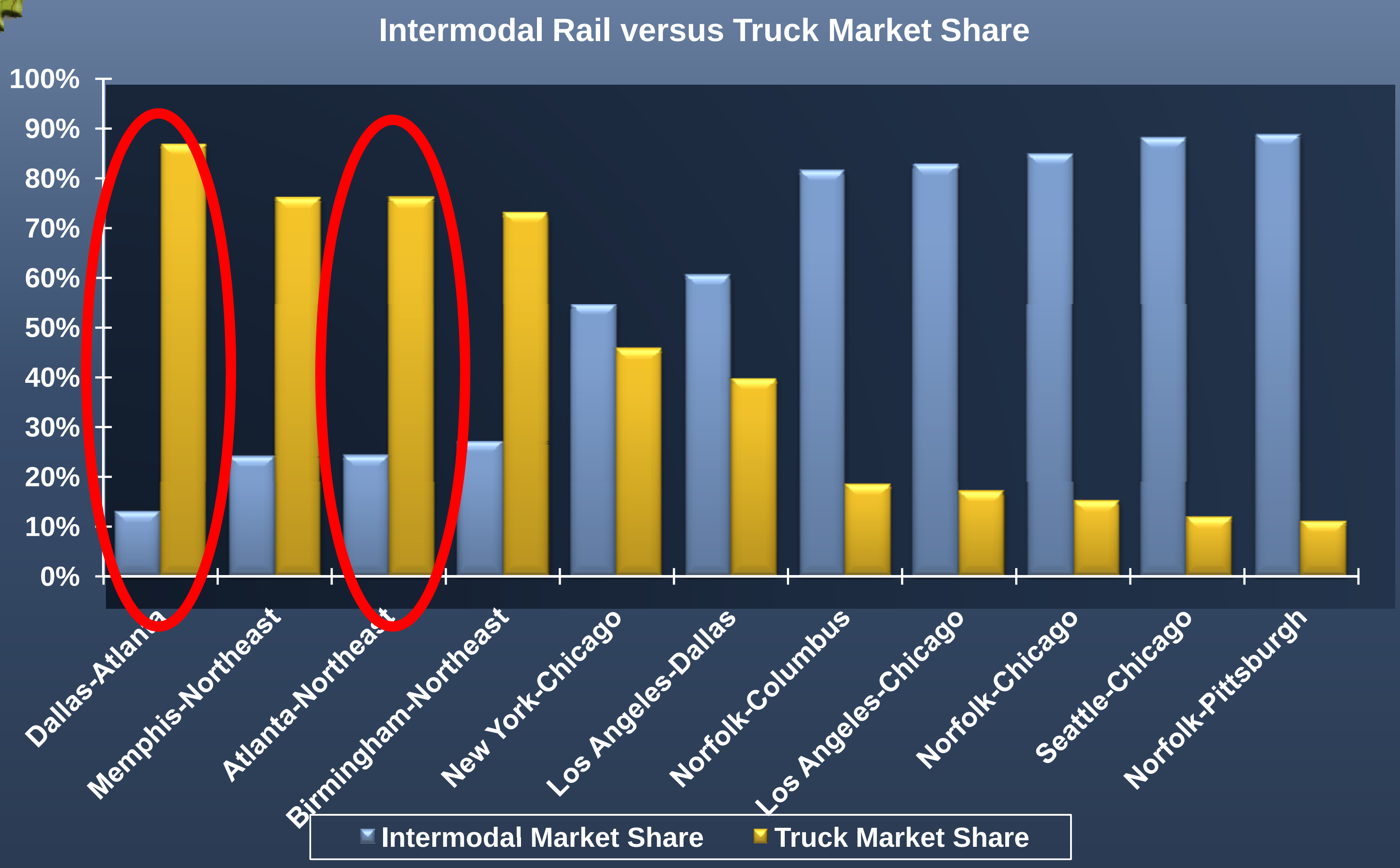
- The Jacksonville to Midwest line is the only heavily trafficked intermodal rail line in the entire southeast.
- Opportunities exist to increase intermodal traffic to the northeast, Texas and points further west.

Source: U.S. DOT, Federal Railroad Association, November 2008, Data from 2006.

Georgia is the intermodal rail leader in the southeast, but has not kept pace with other regions in the country

Low SE traffic is the result of both rail infrastructure needs and non-coastal population centers built around highways

Key Georgia Trade Lanes Remain Dominated By Trucks



Source: Norfolk Southern Presentation, June 2010. Units in Tonnage, 2009.

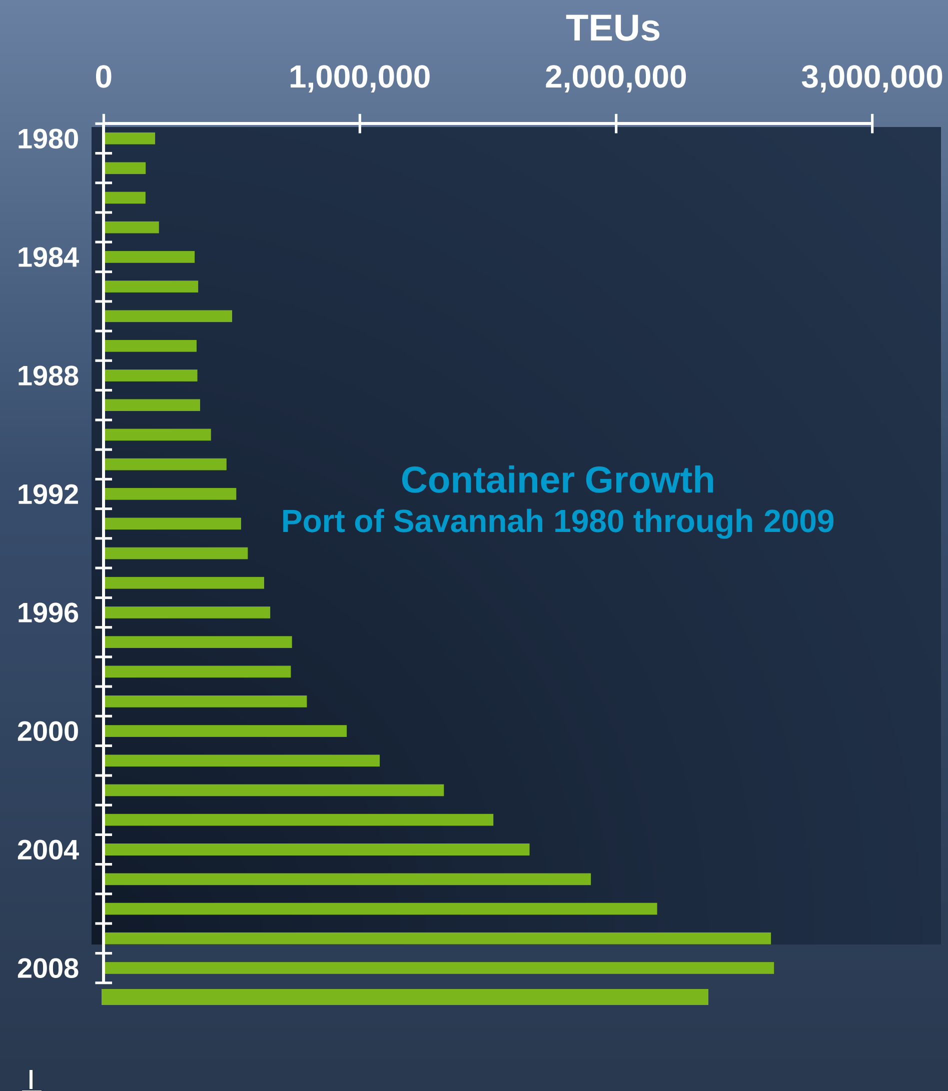
Georgia Not Keeping Pace in Terms of Major Rail Projects on East Coast

- **Heartland Corridor (2007) – Mid-Atlantic (VA) to Midwest**
- **CSX National Gateway (2011) – Mid-Atlantic (VA) to Midwest**
- **Crescent Corridor (Under Development) – new IM terminals in TN, NC, and AL**
  - » **Expansion for GA IM terminal**
- **NS/KCS Meridian Expressway – improved rail from MS to TX**
  - » **Completed in 2006**
- **Project descriptions and competitive impacts of these projects discussed in Theme #3 section (Competitiveness at stake)**

Historical Investment and Growth

Container Ports

- 1967 – GPA operates first container crane in South Atlantic
- 1991 – New Talmadge Bridge opens over Savannah River increasing air draft
- 1994 – Savannah River channel deepened to 42 feet
- 2002 – Mason ICTF opens
- 2008 – Highway 17 Overpass completed Colonel's Island Terminal
- 2008 – Four new super post-panamax cranes on-line
- 2009 – Chatham Yard ICTF opens
- 2010 – Container Berth 8 completed Garden City Terminal



Source: American Association of Port Authorities, 2010.

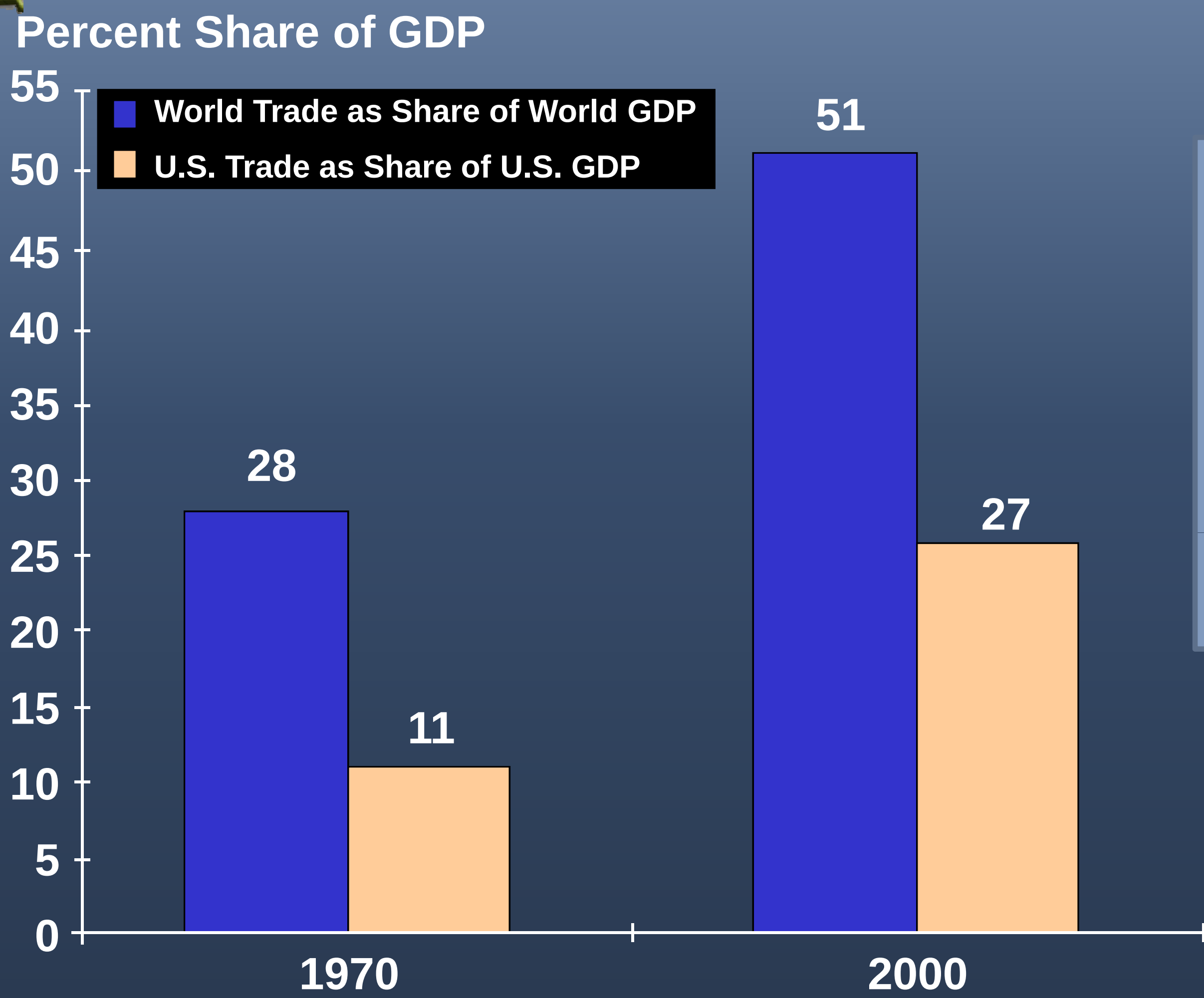
Savannah is the Fastest Growing U.S. Port

Port	1980	1990	2000	2008	2009	Growth 1980-2008	Growth 2008-2009
Los Angeles	0.6	2.1	4.9	7.9	6.7	1,141%	-14%
Long Beach	0.8	1.6	4.6	6.4	5.1	670%	-20%
PANYNJ	1.9	1.9	3.1	5.3	4.5	170%	-13%
Savannah	0.2	0.4	0.9	2.6	2.4	1,203%	-10%
Oakland	0.8	1.1	1.8	2.2	2.1	186%	-8%
Houston	0.3	0.5	1.1	1.8	1.8	498%	0%
Hampton Roads (VA)	0.4	0.8	1.3	2.1	1.7	433%	-16%
Seattle	0.8	1.2	1.5	1.7	1.6	118%	-7%
Tacoma	n/a*	0.9	1.4	1.9	1.5	n/a	-17%
Charleston	0.2	0.8	1.6	1.6	1.2	586%	-28%
Total U.S. (Mainland)	7.4	14.4	27.5	39.7	34.3	436%	-14%

Number of containers (millions)

Source: American Association of Port Officials, Consultant Analysis.
*Tacoma did not track container data in 1980

International Trade Is An Increasingly Important Part of the World Economy



Panama Canal traffic jumped from 235,000 to 4.6 Million TEUs from 1996 to 2008

» Increasing by 1,857%

Source: International Trade Administration, World Trade Organization, CIA World Factbook, Panama Canal Talking Freight Presentation – Feb. 2010

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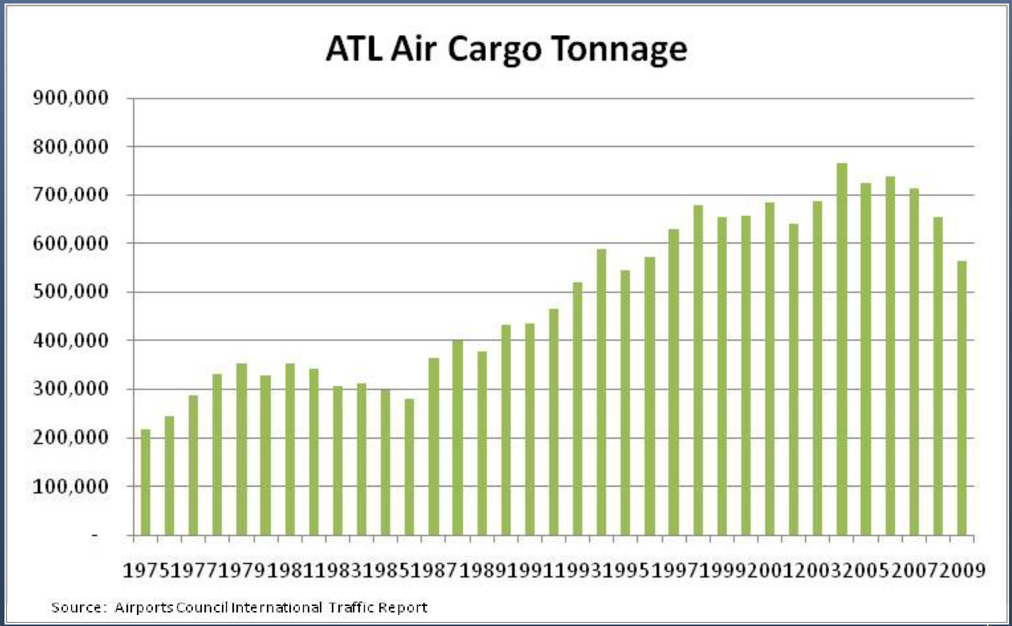
Historical Investment and Growth
Air Cargo

- **1977 – $500 million dollar redesign of Atlanta airport. Called the "largest construction project in the South"**
- **1984 – 4th runway opens**
- **2000 – South Air Cargo Terminal opens**
- **2005 – 5th runway opens. 40% capacity increase**



Most Georgia Air Cargo is Carried in "Belly" of Delta Passenger Flights – Not FedEx or UPS

Airport	Market Type	2009 Tons (millions)
Memphis	Integrator Hub – FedEx	3.7
Anchorage	Trans-Pacific Transfer Operations	2.0
Louisville	Integrator Hub – UPS	1.9
Miami	Primary Gateway to Latin America	1.6
Los Angeles	Primary Asian Gateway	1.5
NYC (Kennedy)	Gateway to Europe and Asia	1.1
Chicago (O'Hare)	Central U.S, International Gateway	1.0
Indianapolis	FedEx Secondary Hub	0.9
Newark-Liberty	FedEx Secondary Hub	0.8
Dallas/FTW	American Airlines Hub	0.6
Atlanta	*Delta Hub*	*0.6*

Air cargo in Atlanta is primarily dependent on Delta Air Lines passenger traffic

Source: Airport Council International Traffic Report, Consultant Analysis

Theme 3

- As agreed upon earlier, the themes for "Making the Business Case for Freight" were developed based on SSTP themes
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Georgia Faces Challenges at the Global, Domestic, and Local Trade Levels

- **Global trade – trade with other countries**
  - » **Panama Canal has spurred development at several East Coast ports**
- **Domestic trade – trade to rest of U.S.**
  - » **Rail improvements outside Georgia are creating cost advantages for other states**
- **Local trade – trade within Georgia**
  - » **Other southeastern states have significant highway projects underway to help circulate goods throughout their local economies**

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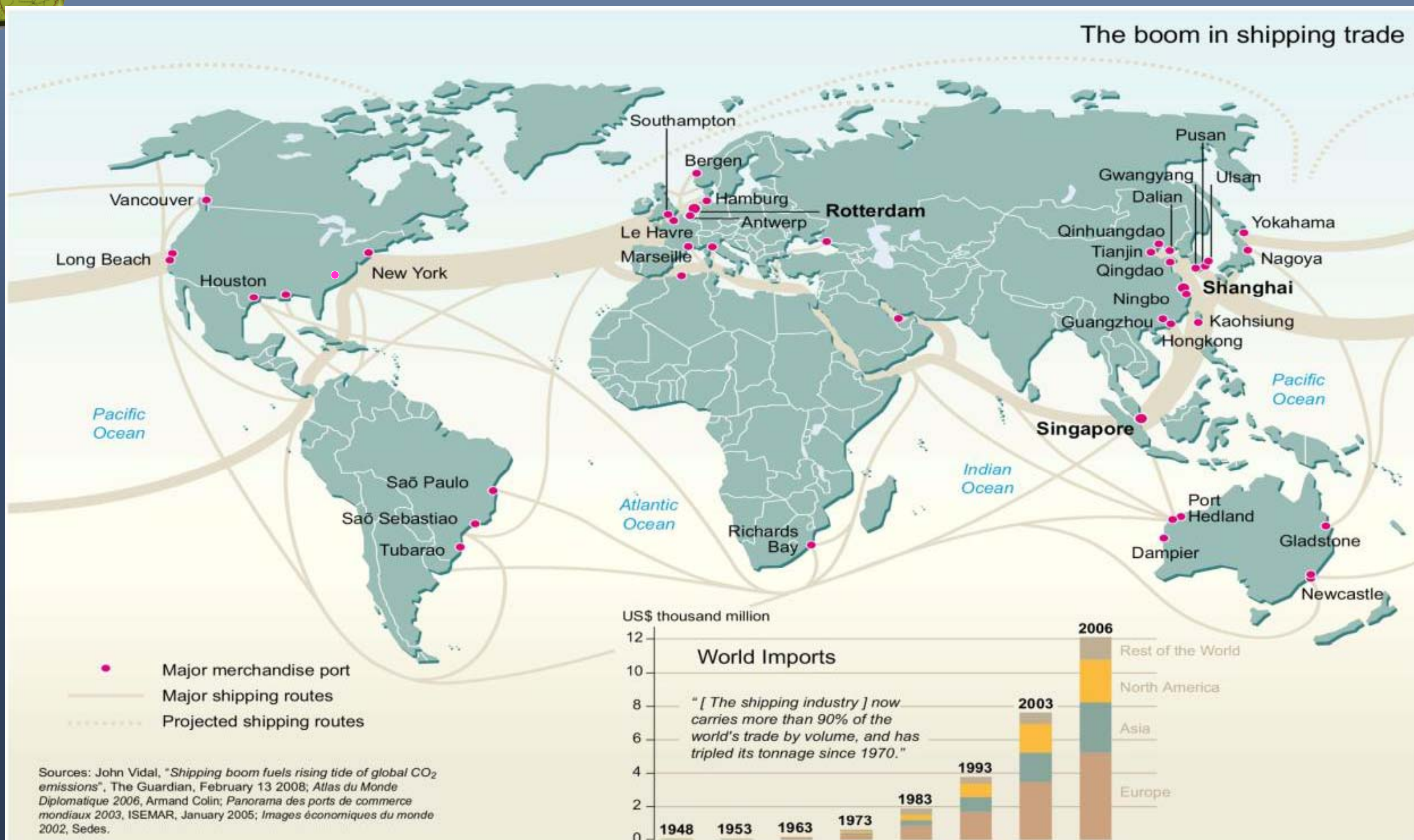
Global Air Cargo Competitive Landscape

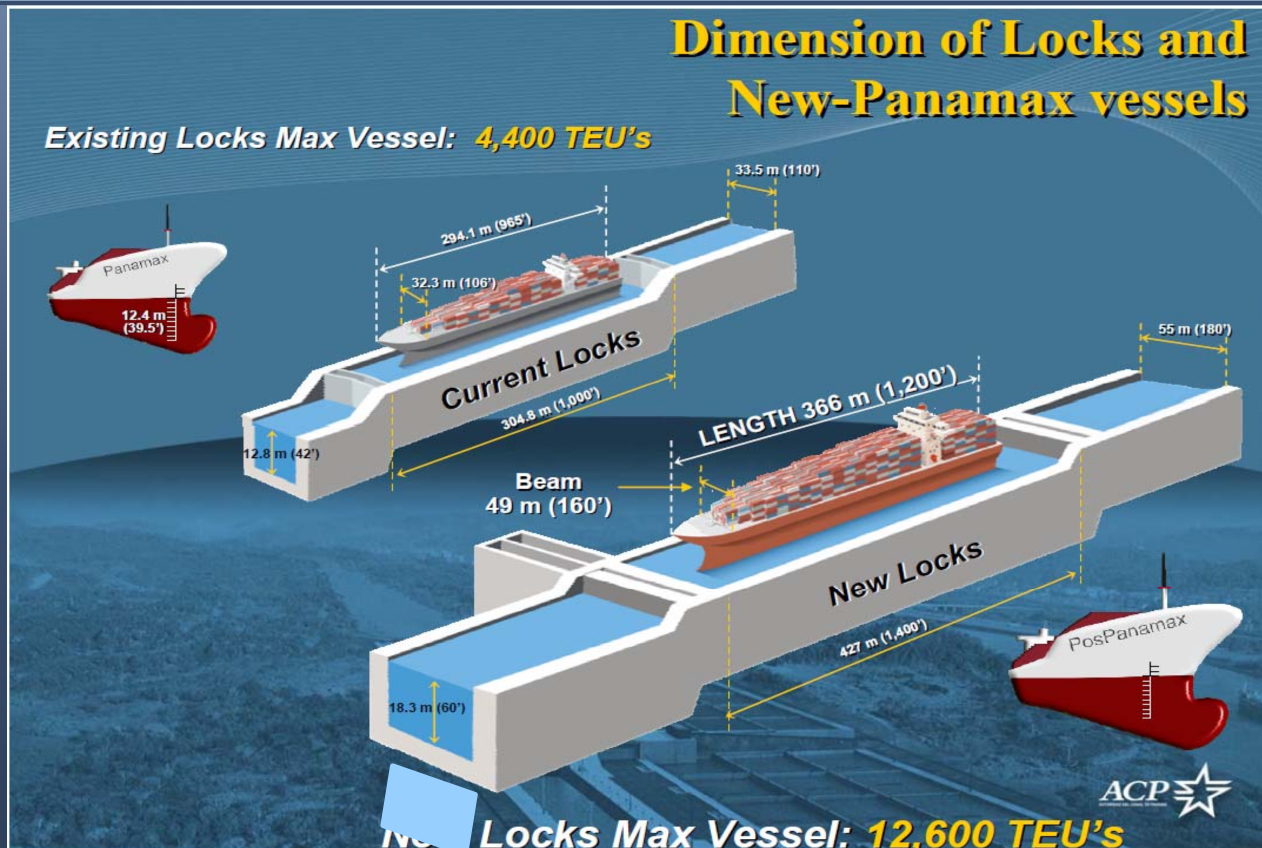
- **Atlanta airport faces stiff competition to capture global air cargo trade**
  - » **New York captures European air cargo**
  - » **Miami captures Latin American air cargo**
  - » **Houston, LA, Chicago capture Asian cargo**
- **Atlanta air cargo traffic limited to destinations that are relatively close to airport**
- **Atlanta and its competitor airports have available capacity and are aggressively pursuing customers**

Global Marine Port Trade Is Also Intensely Competitive



Source: Institute of Trade and Transportation Statistics presentation to FHWA Talking Freight Seminar, February 2010

Panama Canal Widening Will Increase Maximum Ship Sizes by 250% (Opens in 2014)

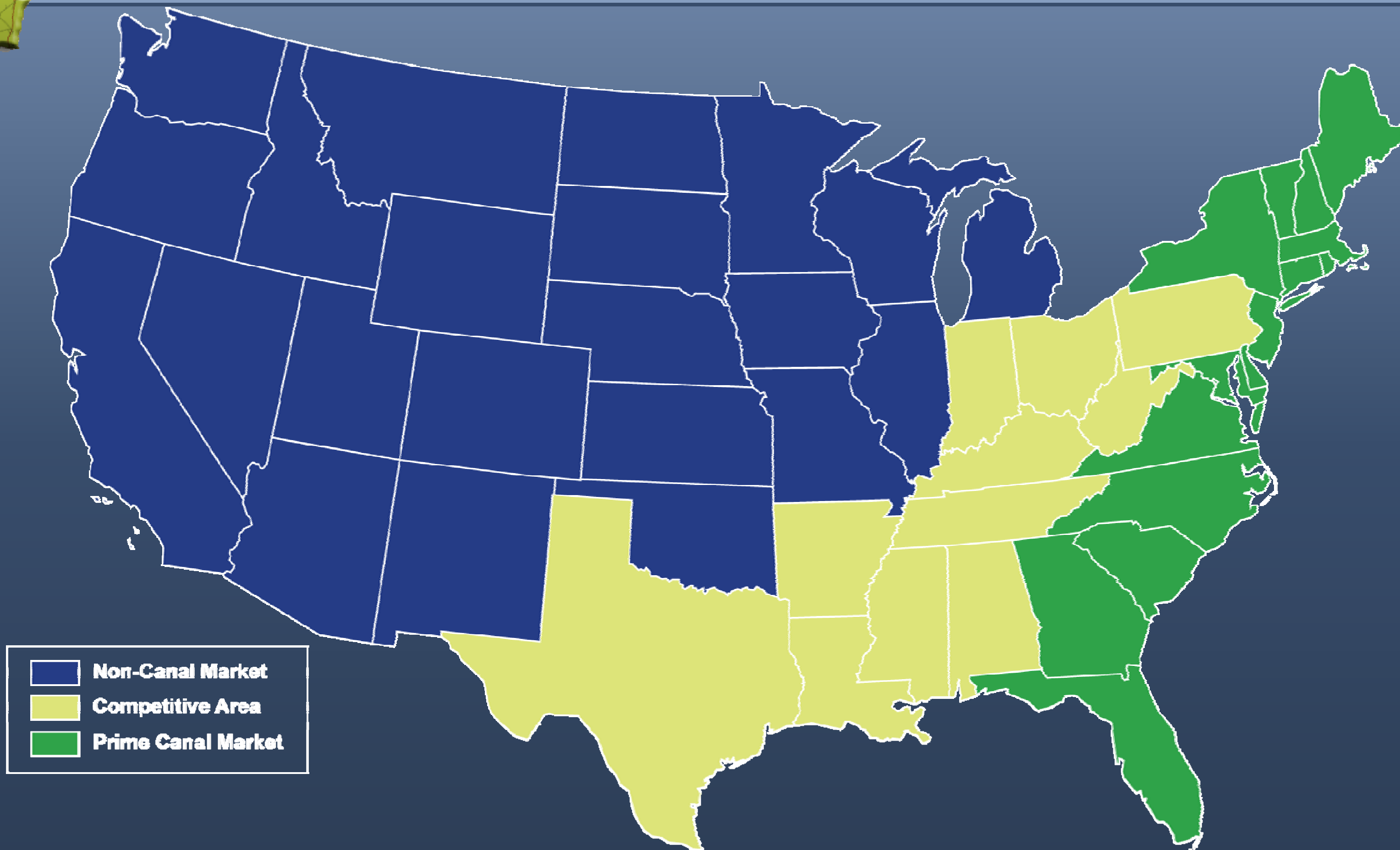


Source: Panama Canal presentation to FHWA Talking Freight Seminar, February 2010

Post-Panamax vessels refers to vessels sized to fit through new locks at Panama Canal

Post-Panamax vessels are the length of 4 football fields

Panama Canal Widening Lowers Shipping Costs for Asia to the East and Gulf Coasts



- **Estimates range from 1.8 to 3.0 million containers could shift from the West Coast by 2015**

Source: Panama Canal estimates 1.8 million in traffic increase, Drewery Consultants estimates 3.0 million. Map developed by Drewery Consultants

Several Ports Currently Have Greater Depths than Savannah

East and Gulf Coast Ports	Mean Low Water Depth
Norfolk	48’
Charleston	47’
New Orleans	45’
New York/New Jersey	43’
Wilmington	42’
Savannah	42’
Houston	40’
Baltimore	40’
Miami	39’
Jacksonville	38’
Boston	38’
Philadelphia	38’

Source: Consultant Research; Panama Canal presentation to FHWA Talking Freight Seminar, February 2010

- Real-time water depths vary based on tides
- 48’+ ideal depth to take full advantage of Panama Canal widening
  - LA/LB, Oakland, Seattle are already 50’ “MLW”
- Due to high cost of dredging, not all ports will get there
- Tremendous “first mover” advantage to the ports that deepen first

East and Gulf Coast Port Plans

Strong Competitors

New York/New Jersey

- $2 billion committed for increasing channel to "MLW" 50 feet, expanding on-dock rail, adding road access
- Commitment to build a 110-acre container terminal
- Needs to resolve clearance issue at Bayonne Bridge and replace Goethals Bridge – each project costs over $1 billion dollar

Port of Virginia (Norfolk)

- Depth already sufficient
- Heartland Corridor provides double-stacking to the Midwest

Port of Charleston

- Likely to compete with Savannah to be first port of call for ships
- Commitment to build $750 million, 280-acre terminal at former Naval Base with near-dock rail facility under negotiation
- No plans to deepen harbor

Source: Consultant Research.

East and Gulf Coast Port Plans
Moderate Competitors

Baltimore

- Signed deal to lease terminal to Ports America
- Ports America constructing new 50-foot berth using private funds
- Ports America paying for road, bridge and tunnel improvements

Houston

- Bayport terminal expansion recently doubled its capacity
- Geographically positioned to become a national hub

Jacksonville

- Recently opened the 158-acre container terminal
- Agreement for a 90-acre terminal to open in 2011
- Strong rail access – on-dock loading
- Wants to dredge to get to 45' depth; No plans/commitment

Source: Consultant Research.

East and Gulf Coast Port Plans
Weaker Competitors

Miami
- Plans to deepen to 50’ within the next three years
- Currently building tunnel to connect port directly with I-95
- Location at the tip of Florida is not ideal for distribution

Mobile
- Opened a new container terminal in 2008
- Constructing a new turning basin to handle larger ships
- 160,000 on-dock rail facility under construction

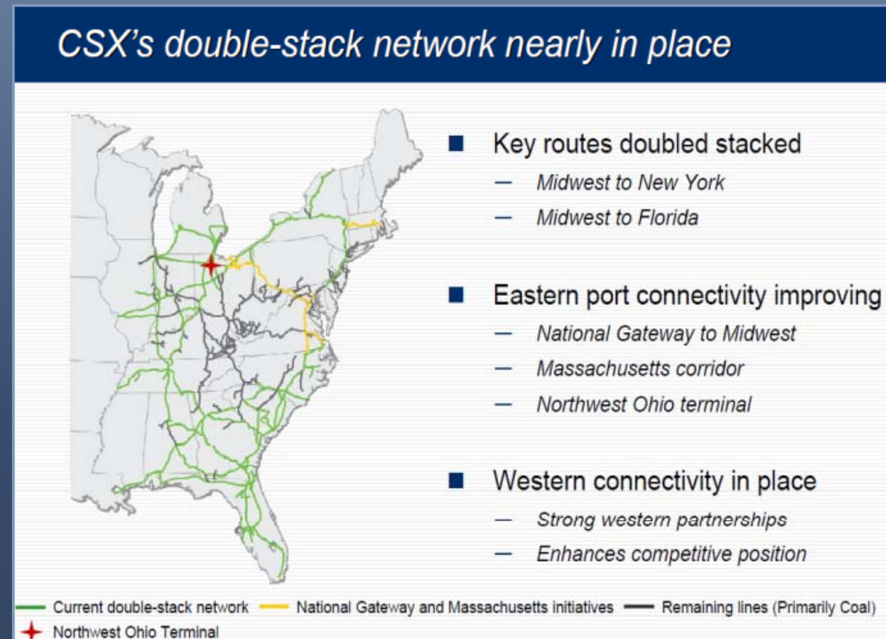
Tampa Bay Area
- Tampa – vision to capture a larger share of Florida traffic
- Manatee – purchased land for first ever container port

Wilmington
- Plans to build container terminal on a greenfield site, but landside access and dredging are problematic

Source: Consultant Research.

Rail Initiatives: Mid-Atlantic to Midwest Projects

Source: NS Quarterly presentation, 2Q2010



Source: CSX Quarterly presentation, 2Q2010

Double-stack capabilities being added from VA to KY to WV to OH and Chicago

- **28 tunnels, 24 overhead obstructions redeveloped**
- **VDOT, ODOT, WVDOT provided partial funding**

CSX National Gateway initiative is focusing on completing its double-stack network

Rail Initiatives SE: Crescent Corridor

Most of the development is happening north and west of Georgia

The most comprehensive public-private partnership for improving freight rail transportation in the East

- 300 miles of new passing track and double track by full development
- New or expanded terminals in 11 markets
- $2.5 billion in new investments through full corridor development

More options for domestic shippers

- Existing 2,500 mile intermodal rail network from New Jersey to Louisiana parallel to Interstate highways (I-20, I-40, I-59, I-75, I-76, I-77, I-78, I-81, I-85, and I-95)
- The nation's most direct intermodal rail route between the Northeast and South

Source: NS Presentation, June 2010

Major Highway Projects in Competitor States – Under Construction or Recently Built

- **Long-Haul Corridors**
  - » **I-22 from Memphis to Birmingham**
  - » **I-40 Truck Climbing Lanes in Tennessee**
  - » **I-69 Corridor from Texas to Indiana**
- **Local Trade Corridors**
  - » **Charlotte I-485 “Outer Beltway”**
  - » **Greensboro Urban Loop**
  - » **Wilmington I-140 Outer loop**
  - » **Memphis portion of I-69/I-269**
  - » **TN-840 Nashville Beltway**
  - » **I-795 Outer beltway in Jacksonville**

Source: Consultant Research

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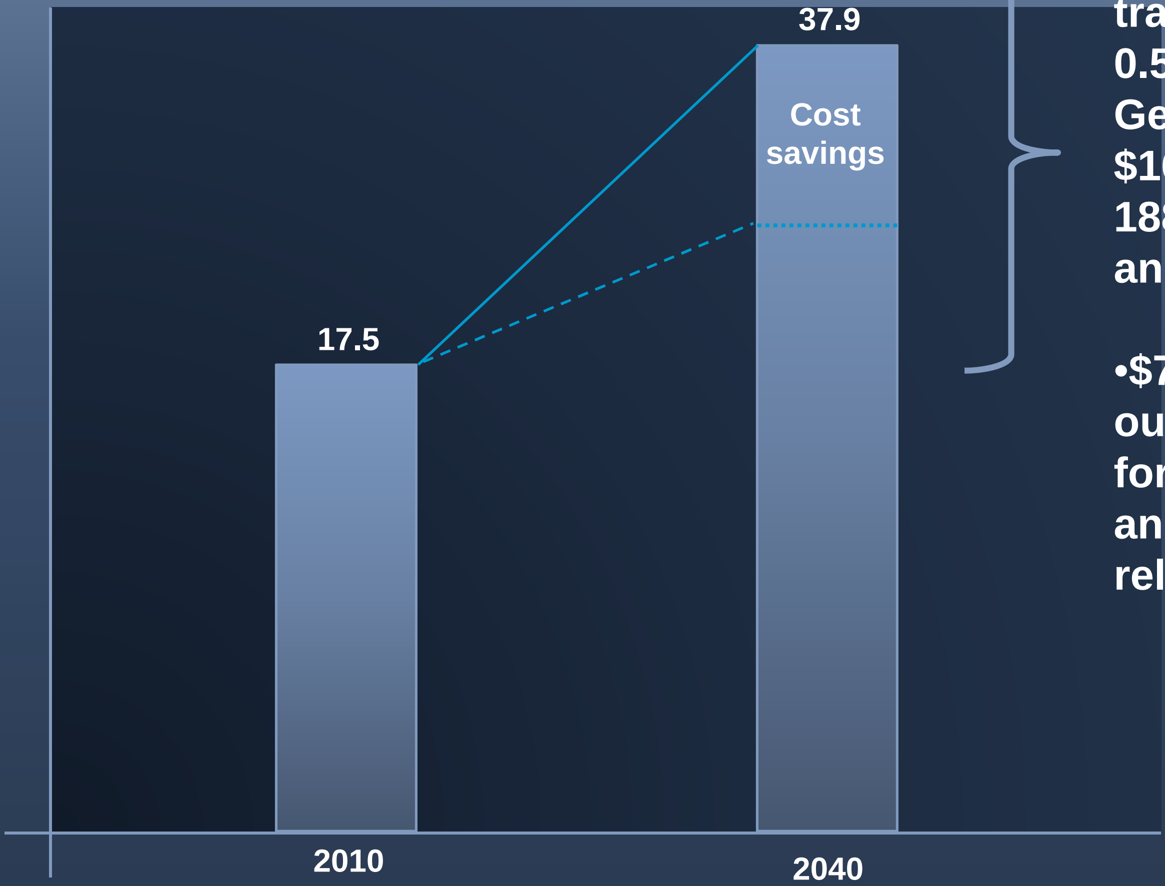
Economic Benefits of Reducing Transportation Costs

Total Transportation Costs in Georgia ($ Billions)



- By reducing transportation costs by 0.5% per year, the total Georgia economy will gain $16 billion in output and 188,000 jobs between 2011 and 2040
- $7.1 billion of economic output will be generated for freight-related sectors and 28,500 jobs in freight-related industries

Source: BEA, REMI Forecast, NHI Freight Planning Course 2005, Consultant Analysis

Conclusions on Making the Business Case for Investing in Freight

- Freight-related sectors follow the SSTP themes by exhibiting strong growth through the 1990s and weaker growth over the past decade
  - Reflects changes in levels of investment over the past 30 years
- Each freight mode has unique investment opportunities that will benefit Georgia's economy
  - Investment in highway mode is needed to hold congestion in check
  - Investment in rail can boost Georgia's economy by providing local businesses with modal options
  - Immediate investment in ports will position Georgia to capture forthcoming surge in container traffic
  - Air cargo opportunities will need to be coordinated with Delta's air strategic planning process for air cargo