

# Future Freight Capacity Needs

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# Overview of Presentation

- Nature of Study and Report
- Framework and Selected Findings of Study
- Conclusions and Recommendations
- Issues in the freight industry since 2001

# Charge to Study Committee

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- Examine trends and evaluate concerns
- Propose changes in government policy

# Information Resources

- Review of past assessments/studies
- Survey of immediate policy issues
- Trends in traffic, infrastructure, and performance
- Four case studies

Virginia I-81/ Shenandoah Route

Upper Mississippi Locks

Washington FAST Corridor

Florida Freight Stakeholders Task Force

- Industry interviews

# Five “ALARMING” Trends

- 1 Stagnant highway spending combined with continual traffic growth
- 2 Railroad industry downsizing and service disturbances
- 3 Congestion at terminals and border crossings
- 4 Long lead times and rising costs of infrastructure projects
- 5 Urban congestion and freight-passenger conflicts

# Findings from the Trends

## 1 Stagnant Highway Spending and Traffic Growth

- Highway capital stock is growing, but not as fast as VMT
- No good data tracking systemwide performance; available data do not prove general deterioration
- Evidence of highway productivity gains
- Many missed opportunities for high-payoff improvements

# Findings from the Trends

## 2 Railroad Downsizing and Service Disruptions

- Are major components of system max-ing out on capacity?  
There are conflicting indications
- Merger-related service disruptions were not indicators of capacity shortage

# Findings from the Trends

## 3 Growing Terminal, Border Congestion

- DOT: data insufficient to judge adequacy of IM connector roads or of funding available
- Port system as a whole is not capacity-constrained (but data scarce)
- Border crossings: a complex infrastructure/regulatory/political problem



# Findings from the Trends

## 4 Lengthening Project Delivery Times and Costs

- Anecdotal data that environmental review adds 1-6 years to delivery time of large highway projects
- GAO: Airport runway extensions becoming impossible
- Costs, benefits of review have never been studied

# Findings from the Trends

## **5 Urban Congestion and Passenger/ Freight Conflicts**

- Bottlenecks tend to be near urban areas
- Freight – passenger rail usage issues

# Conclusions from the Trends

- Still ample resources for expansion
- Pressure on transport costs from congestion; regulation likely
- Technology will reduce costs
- Market will respond to costs: changes in quantity, mix of services purchased; changes in land use
- Outcome will be tolerable, but far from optimal, without reforms in pricing, management, regulation

# Prescriptions for Resolving Capacity Problems

- 1 Maintain the status quo:** more resources for existing programs, refinements in program structure, more coordination
- 2 Activist government:** new programs, expanded responsibilities, p/p partnerships, private sector grants, increased regulatory oversight, promotion of favored course of development
- 3 Minimalist government:** deregulation, privatization, pricing, devolution

# Guiding Principles for Government Freight Programs

- Goal of economic efficiency
- Government role is limited
- Government responsibility does not mean subsidy
- Finance provisions affect performance

# Recommendations from TRB Report

- Comprehensive federal government freight program
- Recommendations on specific programs
  - Federal Freight Infrastructure Programs
  - Port Development
  - Operation and Management of the Inland Waterways
  - Decision-Making Processes and Planning
  - Regulatory Issues (reducing project delivery time)

# Freight Capacity Issues Since 2001

- Post-September 11 freight Security
- Port Congestion
- Increased Intermodal Activity
- Chicago's CREATE Project
- Trucking Hours of Service
- SAFETEA-LU
- Truck Only Lanes
- Iowa Truck/Rail Capacity

# Post-September 11 Freight Security

- Congestion is evident near ports and border crossings
- Increased delay in ship to truck loadings
- Businesses that operate near border crossings or process international shipments are affected
- New processing technology at borders will aim to improve delays



# Port Congestion

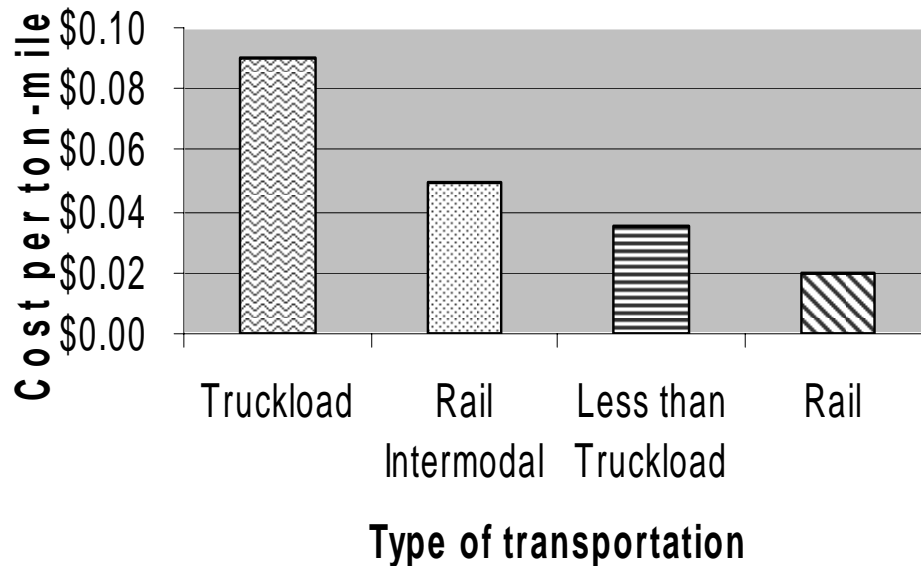
- Southern California Ports handle much of the container ship traffic from Asia
- Los Angeles/Long Beach Ports handle 25 million containers per year
- Significant ship/truck congestion in the areas of the ports
- Solutions:
  - Alameda Corridor
  - Ocean Carriers have sent ocean vessels to Canadian, Mexican and Eastern U.S. ports to avoid congestion

# Increased Intermodal Activity

- More Asian Imports arriving on container ships
- Containers from 280 trucks can fit onto one freight train
  - Shortage of railcars
- Truckload capacity constraints, intermodal offers a shipping alternative
- Truckload freight costs have increased rapidly
  - 9.3% increase in intermodal activity (2004)

# Increased Intermodal Activity

Cost of haul per ton mile by various forms of transportation



- ➔ Rail and intermodal have inherent advantage in cost per ton mile of heavy freight
- ➔ Metro areas are strategizing to include intermodal into long range plans

# Chicago's CREATE Program

- Chicago Region Environmental and Transportation Efficiency Program
- Program to streamline rail and truck movements through Chicago with added emphasis on intermodal activities
- Interchange of several interstate highways, four different railroads, numerous at-grade crossings
- traffic passing through Chicago affects 5 million jobs across the country, \$780 billion in goods, and \$217 billion in wages

# Chicago's CREATE Program

- Emphasis on rail and intermodal activities as efficient transportation through the area
- \$1.5 billion public-private plan to ease congestion and increase efficiency of freight travel in the Chicago area
- Coordinating truck routes, separation of passenger and freight trains, reduce rail at grade crossings

# Trucking Hours of Service

- Effective October 1, 2005
- Amount of work time for truck drivers reduced from 15 hours to 14 hours
- Maximum of 11 hours after 10 consecutive hours off duty
- 60 hours of work every 7 days,
  - Drivers can restart their 7-day period if they were off-duty for 34 consecutive hours

# Trucking Hours of Service

- Negative impact on capacity utilization within the freight industry
- Reduced fleet capacity by 12% in total shipments
- Impacted driver scheduling of trips through congested urban areas
- Change in market structure of motor carrier industry
  - Carriers prefer longer haul trips

# SAFETEA-LU and the Freight Industry

- Freight Intermodal Distribution Pilot Program
- Freight Planning and Capacity Building Program
- Transportation Infrastructure Finance and Innovation Act
- Coordinated Border Infrastructure Program



# Truck Only Lanes

- ➔ A separate facility constructed for heavy vehicles
  - Constructed within the median of an existing interstate highway corridor
    - » Separated by a jersey barrier from auto traffic
  - Constructed as a separate limited access truckway from the mainline interstate cross section
- ➔ LCV Operation would be allowed

# Existing Truck Lanes

- NJ Turnpike Dual-Dual Configuration
  - “Cars only” on inner set of lanes
- Studies have considered truck lanes for:
  - I-81 in Virginia
  - I-80: Illinois/Iowa
  - I-35 Trans-Texas Corridor from OK/TX border to Mexico
  - I-710 near Port of Long Beach (CA)

# Freight Industry Benefits of Truck Only Lanes

## → LCV Operation

- Savings for the line haul portion of a trip

## → Operating cost savings

- Reduction in truck idle times
- Higher average speeds because trucks have similar operating characteristics
- Fuel cost savings/lower emissions levels

# Travel Time Savings from Truck Only Lanes

- Est. \$10 million in annual travel times savings (Seattle Feasibility Study)
- More predictable travel times for motor freight
  - Expansion of just-in-time delivery options
  - Improvement in domestic and international competitiveness

# Issues in Iowa Since the Release of the Report

## → I-80 Capacity issues

- Maintenance issues
- Capacity improvements will be needed
- Consideration for heavy truck volumes

## → Mississippi River RR Crossing in Clinton

- RR Bridge must swing open to accommodate barges on the river

# Iowa Rail Freight Demand Issues

- Mergers have reduced the class I railroads
- Competition from trucking and water transport
- Shift from shipping grain toward the movement of value added goods where grain is the principal input
- More Iowa goods travel to Mexico, Canada, and the Pacific Northwest by rail

# Overall Conclusions

- Freight transportation is growing and transforming the global market
- Freight capacity improvements are necessary to ensure reliable product deliveries
- Intermodal and rail movements will reduce freight congestion on U.S. highways
- New funding mechanisms such as public-private partnerships should be embraced to fund large projects that will improve freight capacity
- Government policies should be based on sound economic principles