National Freight Trends, Issues, and Policy Options

August 2001

FHWA
Objectives…

- Discuss emerging trends
- Present national freight analysis efforts including forecasts
- Identify some of the emerging policy issues toward transportation reauthorization in 2002-2003
Emerging Freight Trends and Issues

- **Markets/Logistics** (*demand*)
  - From national markets to global markets
  - From a manufacturing to a service economy
  - Moving to customer dictated just-in-time delivery system

- **Carriers/Transportation Systems** (*supply*)
  - From modal fragmentation to cross-modal coordination
  - From system construction to system optimization
  - Increased DOD reliance on commercial freight system

- **Public Policy**
  - From economic deregulation to safety regulation
  - From modal to multi-modal surface transportation policy
  - Increased environmental accountability
National Highway System Intermodal Connectors - Infrastructure Constraints

- NHS Connectors
  - Poor physical condition
  - Poor geometrics
  - “orphan status”
  - inadequate coordination of investment strategies
Travel Rate Congestion Index

Peak-Period Travel Times Have Increased Significantly Compared to Off-Peak Travel Times in Across the Nation

Source: Texas Transportation Institute
Freight Transportation Perspectives
State and MPO focus is regional and local; private sector focus is increasingly national and global

Private Sector
(Shippers, Carriers)

Public Sector
(States, MPOs)
National Multimodal Freight Data and Policy Analysis Framework

- Approximation of current national flows
- Economic trade forecasts to 2020 (domestic and international) and estimated modal components
- Assessment of capacity and investment implications
- Policy development tool for future legislation
Total Domestic Freight Tons and Value

Freight traffic moving into, out of, and within the U.S. totaled 9.8 billion tons and $9.1 trillion in 1998- 1st approximation

<table>
<thead>
<tr>
<th>Mode</th>
<th>Tons (billions)</th>
<th>Value ($trillions)</th>
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</thead>
<tbody>
<tr>
<td>Truck</td>
<td>6.0</td>
<td>7.0</td>
</tr>
<tr>
<td>Rail</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>Water</td>
<td>1.0</td>
<td>1.5</td>
</tr>
<tr>
<td>Air</td>
<td>0.5</td>
<td>0.5</td>
</tr>
<tr>
<td>Intern'l</td>
<td>0.5</td>
<td>0.5</td>
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Legend: Tons & Value
Truck Freight Flows, All Commodities
All truck types; highway freight density in tons 1998
Rail Freight Flows, All Commodities
Rail freight density in tons 1998
Inland Waterway Freight Flows, All Commodities Waterway freight density in tons 1998
Air-Freight Origins and Destinations
All commodities, domestic airport-to-airport traffic, in tons
Top Gateways for International Freight

Exports and imports in tons

[Map showing top gateways for international freight, with different colors for exports and imports.]
Highway Flows of International Freight Moving into and From the Port of Charleston
Freight Forecast Growth Rates-Trend

**US Domestic:**
- 1998-2020: 2.9% (Cumulative: 87%)
- 1998-2010: 3.4%
- 2010-2020: 2.4%

**US International:**
- 1998-2020: 3.4% (Cumulative: 107%)
- 1998-2010: 4.0%
- 2010-2020: 2.9%

**International Sectors:**
- US/Canada 1998-2020: 3.1%
- US/Mexico 1998-2020: 3.5%
- US/ROW 1998-2020: 3.4%
Growth by Region: US Inter & Intra-Regional Tonnage by 2020
1998 and 2020 domestic truck flows
NAFTA--US/Canada Truck Traffic on US Highway Network, 2020 (Tons)
NAFTA--US/Mexico Truck Traffic on US Highway Network, 2020 (Tons)
Overseas Inland Trade: Truck Traffic on U.S. Highway Network, 2020 (Tons)
Next Steps--Capacity and Investment Analysis

- Assign future freight flows to modal networks
- Conduct highway system capacity analysis to understand the nature of emerging constraints, e.g. nodes, corridors, gateways, connectors, metropolitan congestion
- Develop illustrative multimodal case studies in selected regions of the country; e.g. Southern Calif., Chicago rail and intermodal access, Mid Atlantic rail, Pacific NW
- Assess future investment requirements for Biennial Surface Transportation Condition and Performance Report to Congress in 2002.
The Policy Challenge

- Both passenger and freight demand upon the nation’s infrastructure will increase significantly
- Freight volumes will nearly double to 2020; with higher growth in some corridors and nodes
- Current planning and financing methods do not adequately address freight’s unique concerns
- Intermodal linkages not seamless
- Increased focus on safety and environmental issues
- Economic competitiveness at stake
**U.S. National Outreach/Policy Analysis**

- Share freight analysis findings, forecasts, and system impacts with stakeholders and assess policy implications
- Hold a series of outreach forums on multimodal freight finance, multi-state issues, planning, operations to assess current practice and formulate future policy options
- Develop a ‘Freight Story’ and conduct national freight summit Dec. 2001 to lay groundwork for policy initiatives
- Report to Congress on system condition, performance, and future investment requirements in 2002
- Develop surface, marine, air transportation reauthorization legislative strategies in 2002 that fully reflect the needs of freight and passenger considerations
# DOT Freight Outreach Events

<table>
<thead>
<tr>
<th>Project Elements</th>
<th>Q6 1/1/01 - 3/31/01</th>
<th>Q7 4/1/01 - 6/30/01</th>
<th>Q8 7/1/01 - 9/30/01</th>
<th>Q9 10/1/01 - 12/31/01</th>
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<tbody>
<tr>
<td>Conferences/Workshop Events</td>
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<td>Freight Finance Conference - St. Louis, Missouri</td>
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<td>National Forum on Multijurisdiction - Multistate - Alexandria, Virginia</td>
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<td>Freight Operations Workshop - Long Beach, California</td>
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<td>Planning Workshop - (Detroit, Michigan and Memphis, Tennessee)</td>
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<td>International Freight Logistics Scan Rollouts (Brownsville, Texas and Toronto, Canada)</td>
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<td>National Freight Forum - Washington D.C.</td>
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Preliminary Freight Funding Options

Expanded eligibility or new programs
- Enhance the ability to co-mingle private and public monies
- Expand innovative financing programs
- Expand intermodal project funding
- Create separate programs or set asides for freight planning and implementation
- Create connector or “Last Mile” program that includes all modes
- Identify new sources of revenue for freight projects
Preliminary Freight Institutional Policy Options

- Improve freight planning and programming process
- Improve multi-state/multi-jurisdictional cooperation
- Foster public/private cooperative mechanisms
- Foster improved freight intermodal operations including application of new technologies
Toward Surface Transportation Reauthorization- Freight elements?

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<tr>
<th>Efficiency</th>
<th>Equity</th>
<th>Effectiveness</th>
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<tbody>
<tr>
<td>Intermodalism</td>
<td>Funding Increases</td>
<td>Information/Technology</td>
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<tr>
<td>Innovative Finance</td>
<td>TIFIA</td>
<td>Infrastructure Funding</td>
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<td></td>
<td>State/local freight focus</td>
<td>Institutional Development</td>
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FHWA Office of Freight Management and Operations, USDOT

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