Introduction

During the course of the study to date, many recommendations have begun to emerge:

- Input from stakeholders
  - Listening sessions
  - Workshop
  - Texas Freight Advisory Committee
- Review of other State plans
- Review of other Texas plans
- Review of network data

Today we will discuss a framework for moving forward to begin developing these recommendations.
RECOMMENDATIONS FRAMEWORK
DISCUSSION

Texas Freight Networks
Preliminary Texas Highway Freight Network

- Preliminary Network identified
- Primary Network
  - Refined using a baseline threshold based upon 20 year TRANSEARCH Forecasts – 10 million Tons
  - Connectors
- Secondary Network
  - Based on remaining segments of the initial preliminary network after the primary network was identified

Source: TxDOT
Developing the Preliminary Texas Highway Freight Network

Texas Highway System

Texas Trunk Network

Texas Freight Gateways/Generators

Preliminary Texas Highway Freight Network
Texas Secondary Highway Freight Network

Legend:
- Primary Freight Network
- Secondary Freight Network
- Intracoastal Waterway

Texas Department of Transportation
Transportation Planning and Programming Division
Data Analysis, Mapping and Reporting Branch
December 20, 2013
Texas Rail Freight and Waterway Freight Networks

Legend
- Railroad Border Crossings
- Major Water Ports
- Class 1 Railroads
- Class 3 Railroads
- Gulf Intracoastal Waterway

Needs and Preliminary Recommendations

Feb. 20, 2014
Designation of Freight Networks - Goals

- Focus needed investments to those system elements that provide the greatest gains
- To link modal networks and key freight nodes
- Design and maintain the priority networks for current and future freight capacity needs
- Designate sub-networks for special needs, e.g.
  - OS/OW shipments
  - HazMat shipments

Source: 2012 Texas Transportation Institute

Statewide OS/OW Route Frequencies (FY 04-09)
Freight Network Designation: Discussion

- Is the process undertaken to designate / identify the Texas Freight Network sufficient?
  - Primary Highway Freight Network?
  - Secondary Highway Freight Network?
  - Rail Network?
  - Intracoastal Waterway Network?
Three categories of recommendations

- Policy/Institutional
- Programs
- Projects
Proposed Topic Areas

1. System Capacity
2. System Operations
3. Safety/Security
4. Intermodal and Rural Connectivity
5. NAFTA and Border Challenges
6. Energy/Environment
7. Education/Public Awareness
8. Institutional, Industry and Interagency Cooperation
9. Funding/Financing
1. System Capacity: Overview and Issues

- Eliminate highway bottlenecks
- Identify alternative routes – redundant capacity
- Dedicated or special use lanes for trucks
- Rail capacity constraints
1. System Capacity: Recommendations - Highway

Programs and Projects
- Eliminate highway bottlenecks on Freight Network – redesign and capacity additions where needed
- Expand the highway network through dedicated or special use lanes for trucks (truck only lanes)
- Invest in Highway Freight Network
  - Add lanes where needed
  - Bypass lanes for trucks
- Address Bridge Vertical Clearance Issues on Freight Network

Policy / Institutional
- Revise design standards for Freight Network
- Raise truck size and weight
1. System Capacity: Recommendations – Rail and Maritime

Projects and Programs

- Improve modal connections
  - Improve landside highway access to ports, airports & rail terminals
  - Port and Rail connectivity
- Eliminate key grade crossings; consolidate & separate
- Expand double track rail network
- Identify and develop potential new rail corridors?
- Increase the depth of the GIWW

Policy

- Enhance / expand the role of shortline railroads?
1. System Capacity: Discussion

- Do you have specific recommendations beyond those already mentioned?
- Do you consider any of these recommendations to be “low hanging fruit?”
2. System Operations: Overview and Issues

- **Need: Real-time information!**
  - Statewide traffic information & incident management
  - Commercial driver information
  - Smart routing for commercial vehicles
  - Changeable message / advisory signage

- **Need for dedicated heavy weight freight corridors**
- **Understand costs due to delays and bottlenecks on freight network operations**
- **Clearly define by-pass routes**
- **Others?**
2. System Operations: Recommendations

Programs and Projects

- Statewide integration of ITS
  - Develop a statewide incident management program
  - Develop a statewide traffic management center
  - Use ITS to increase efficiency on Freight Network, e.g. management & operations plan
  - Facilitate information-sharing between jurisdictions
- Enhance and ensure adequate signage on Highway Freight Network
- Signal timing/coordination on Secondary Freight Network
- Interchange Operational Improvements at Primary and Secondary Freight Networks
- Special or dedicated truck only use lanes on Freight Network
2. System Operations: Recommendations

Policy / Institutional

- Statewide coordination of construction activities on Freight Network
- Expand existing truck lane restrictions on Primary Freight Network
- Utilize HOV lanes for truck traffic
2. System Operations: Discussion

- Are there areas of progress in the state or nation that serve as models for operational improvements?

- Do system operational recommendations extend beyond highway networks? What might some of these solutions be?

- Safety is a major focus of TxDOT

- Issues related to freight include:
  - Lack of truck parking
  - Numerous at grade-crossings
  - Poor roadway design
  - Lack of public education

Programs and Projects
- Eliminate modal conflicts (e.g. at-grade rail crossings)
- Address safety “hot spots” on the Freight Network
- Implement a database for sharing information regarding problem motor carriers

Policy/ Institutional
- Increase public education for passenger car drivers
  - How to safely drive around large trucks
  - How to safely maneuver at-grade rail crossings
- Evaluate the potential of private companies developing and/or operating private truck parking areas.
- Revisit TxDOT rest area policies for truck parking
- Conduct a statewide truck parking needs analysis
3. Safety/Security: Discussion

- Are their infrastructure or operational recommendations for non-highway modes that could increase safety of the traveling public?
4. Intermodal and Rural Connectivity: Overview and Issues

- Lack of strong connectivity between the modes detracts from their efficient and productive use
- Lack of regional corridors to connect rural and urban areas
- Need for better port-rail connections
- Adequate and available access points, e.g. truck-rail facilities, promotes the use of alternative modes beyond truck
- Need to connect to neighboring states’ infrastructure
- Access to other modes besides truck in the south and west regions of the state
- Rural regions are isolated from urban areas
- Need to connect US Interstate to Mexico’s infrastructure
4. Intermodal and Rural Connectivity: Recommendations

Programs and Projects

- Facilitate investment in Secondary Freight Network
  - To address rural/urban connectivity
  - Identify key energy and agriculture routes for investment
  - Upgrade, maintain and expand Farm-to-Market roads
  - Construct relief routes to ensure traffic flows in small towns
- Use incentives to expand intermodal options (Class III & short line rail)
- Ensure direct rail access to ports
- Facilitate expansion of rail access to rural areas of the state
- Incentivize longer hours of operations at ports

Policy / Institutional

- Pursue legislation to expand state DOT’s oversight, management, and support of other modes (not just auto).
4. Intermodal and Rural Connectivity: Discussion

- What other strategies would address intermodal and rural connectivity?
Texas shares a common border with Mexico and is subject to not only the direct exchange of freight, but also a significant amount of pass-through freight as well.

The increasing role of the Mexican economy within global trade dramatically impacts Texas border crossings.

Border crossings are subject to extreme traffic congestion.
5. NAFTA and Border/Ports-of-Entry: Recommendations

Programs and Projects

- Re-visit one stop model for inspections
- Provide dedicated crossings for freight
- Adjust border crossing times to off-peak commuter hours
- Provide incentives / tax breaks to change when trucks get to the border
Policy / Institutional

- Utilize ITS and dynamic pricing when possible
- Define an acceptable border crossing queue time
- Collaborate to expand trusted shipper programs/prescreening
- Market the use and development of Foreign Trade Zones.
- Explore partnering with the private sector to provide 3rd party security
- Consider funding partnerships:
  - US Customs and Border Protection/Department of Homeland Security
  - Mexican government
  - Industry partners
- Connect border crossing projects to other TxDOT goals/priorities.
5. NAFTA and Border/Ports-of-Entry: Discussion

- What should TxDOT’s role be on border crossing facilities?

- Are any of the strategies identified unworkable? Why?
6. Energy/Environment Overview and Issues

- The environmental permitting process is time consuming.
- Alternative fuel sources present an opportunity to reduce emissions, but are expensive.
  - More important in non-attainment areas
- Infrastructure is not yet in place for alternative fuels.
  - Lack of fueling stations & distribution network
  - Lack of commercially available LNG locomotive models

- Energy sources can have specific transportation needs.
  - Fracking wells: high truck traffic on rural roads
  - Wind turbines: OSOW; Texas is US leader in wind capacity
6. Energy/Environment: Recommendations

Programs

- Encourage off-peak/24 hour operations
- Explore partnerships with the private sector to implement truck stop electrification

Policy/Institutional

- Support conversions to CNG for drayage and to LNG for long-haul
- Incorporate freight considerations into NEPA
- Streamline environmental permitting process
- Collaborate to become leader in sustainable transportation construction and operations
- Prioritize projects with environmental and air quality benefits in areas of non-attainment
- Consider environment in transportation planning goals
6. Energy/Environment: Discussion

- What steps if any should TxDOT take to encourage the adoption of CNG/LNG?

- Does current demand for wind turbines affect the need for OS/OW routes in Texas? Will it in the future?
7. Education/Public Awareness: Overview and Issues

- Effective freight planning is dependent upon public awareness of key freight issues

- There is a lack of understanding from the public on economic and quality of life benefits that freight provides

- Truck driver shortage
7. Education/Public Awareness: Recommendations

**Policy / Institutional**

- Create and educational campaign to communicate with the public how to safely drive with trucks
- Educate that efficient goods movement provides savings to consumers and businesses
- Encourage MPOs and other planning agencies to participate in existing, free training programs (e.g., the U.S. DOT’s free monthly webinar “Talking Freight.”)
- TxDOT should partner with educational institutions to promote driving as a career
7. Education/Public Awareness: Discussion

- Does the business community in Texas view transportation as a big enough issue to partner on public education efforts?

- By tonnage nearly 70% of goods moving by truck on Texas Highways stay in the state: Could or should Texas become the training ground for the nations truck drivers?
8. Institutional, Industry, Interagency Cooperation: Overview and Issues

- Without the cooperation of other agencies or integration with other TxDOT or external agency plans, TxDOT implementation efforts may not meet the goals of the individual plan
- Communication between agencies and departments
- Collaboration to accommodate varying planning horizons
- Also vital to explore partnerships with the private sector
Policy / Institutional

- Coordinate with neighboring states to ensure efficient movement of freight between states
  - Multistate extensions of key freight corridors
- Coordinate among Texas agencies (DPS, railroad commission, economic development, etc.)
- Develop more public-private partnerships to support railroad expansion
- Enhance coordination with local governments to identify freight infrastructure needs potentially requiring special State assistance
8. Institutional, Industry, Interagency Cooperation: Discussion

- What are some of the strategies to address public and private sector coordination to address freight mobility?
9. Funding/Financing: Overview and Issues

- Critical to identify alternative and innovative funding sources for freight projects
- Need to focus funding on high priority freight corridors
- Freight projects don’t receive fair evaluation in the project selection/prioritization process
- Need alternative measures for allocating funding
- Need to explore alternative funding mechanisms
- Consensus around the fairness of user-pay systems
- Need to balance existing funding needs
9. Funding/Financing: Recommendations

Policy / Institutional

- Increase fuel taxes
- Research foreign direct investments
- Consider changes to State law to allow alternative financing options including:
  - Toll lanes and congestion pricing
  - Increase/incentivize “tolled” truck parking facilities
  - Provide incentives (e.g. TxTag or HOT lanes credit) to encourage trucks to use approved routes and/or suggested bypasses during congestion
  - VMT-based fees
  - Performance-based funding
  - Carload/container lift fee (for rail improvements, including tunnels),
  - State rail infrastructure tax credit
9. Funding/Financing: Recommendations (cont.)

Policy / Institutional

- Public/Private Partnerships for TMCs and ITS infrastructure
  - Statewide Traffic Management Center
  - Statewide Incident Management
  - Joint-funding with Mexico for improved border operations
- Aggressively pursue Federal funding programs that can be used to support freight investments
  - TIGER (Next round April 2014)
  - TIFIA
- Competitive grant/loan programs
  - TIGER type programs at the state level
- Work with freight organizations to highlight infrastructure investment opportunities and benefits to legislative members
The need for additional transportation funding was explored by the 2030 Committee in 2011. One of their recommendations was that users be required to pay for services they consume. What is the best way to do that?
Texas Priority Freight Networks

Nine Topics
1. System Capacity
2. System Operations
3. Safety/Security
4. Intermodal and rural Connectivity
5. NAFTA and Border Challenges
6. Energy/Environment
7. Education/Public Awareness
8. Public and Private Sector Coordination
9. Funding/Financing

Three Categories
- Policy/Institutional
- Programs
- Projects
Summary

- Does the proposed framework of nine key topic areas work?
  - What’s missing?
  - Can some areas be further combined?