

## **Statewide Freight Study Plan**

The Virginia Department of Transportation along with partnering agencies of the Commonwealth of Virginia has been working toward development of the Virginia Statewide Freight Study Plan that is a required element for states to have developed under SAFETEA-LU. The Commonwealth is coordinating with the MPOs on development of this Plan. The MPO in the amendment to the CLRP indicates it will accept the State plan as part of the CLRP by reference; secondly, the amendment action incorporates the responsibility of the MPO to inject freight plan findings into the next full update of the CLRP due in June 2009 which needs to be initiated in spring of 2008.

The staff of the area Planning District Commission is developing information on freight planning employing both available local information, a survey it has conducted for the region including the MPO area, and utilization of TranSearch data issued to it by the VDOT staff.

The attached information is from the Virginia Department of Transportation website and identifies the mission and key elements, the scope of work currently in use, participants in the planning process, and the outreach plan summary for the phases of work.

# Virginia Statewide Freight Study

# Freight Study

The VTrans2025 Final Report highlighted the need to focus resources on freight planning and the Action Plan identified a statewide multimodal freight study as one of eight key initiatives of the new Multimodal Office. The purpose of the study is to increase understanding of the magnitude and impact of freight movement in Virginia, establish a basis for project prioritization, and make recommendations on transportation issues and concerns related to freight movement. Our goals for the freight study include safeguarding the existing freight network, identifying opportunities to improve the system through infrastructure and operational improvements, and ensuring that the Statewide Multimodal Networks link with regional trade centers and support state and national goods movement.

Phase 1 of the freight study is expected to be complete by Spring of 2007. See the schedule here. Phase 2 will take an additional 12 months.

Read the scope of the Phase 1 study here. Key elements of the freight study include:

- Inventory of infrastructure
- Profile of existing conditions
  - Forecast of future conditions
  - Analysis of truck-to-rail diversion potential
  - Review of freight-related policies and issues
  - Analysis of the impact of freight movement to Virginia's economy
  - Recommendations for policy, legislative, and institutional changes
  - Project-level recommendations
- Framework for a continuing freight planning process

Stakeholder involvement is a key component of the freight study. Initial efforts include a freight stakeholder forum and a questionnaire of large shippers and employers, both of which will provide information on key issues related to freight mobility. A Freight Advisory Committee has also been established to provide input and feedback into the study, serve as a link to the larger freight community,

help build partnerships between the public and private sectors, and help convert the study to action.

# Scope of Work

## ■ Purposes, Goals, and Elements

The Scope of Work for this project includes the following:

- Compiling an inventory of the existing freight network by its key components: high-way, rail, air, ports, intermodal facilities and connectors, and distribution centers;
- Identifying current and future needs on the system;
- Examining the macroscale economic impact of freight movement;
- Providing recommendations for state planning and programming policies; and
- Including an extensive program of coordination among public sector agencies, including regional planning bodies, and outreach to the public and private stakeholders.

**Table 1. Purposes, Goals, and Elements of the Multimodal Freight Study**

Purposes	Goals	Elements
Increase freight understanding	Safeguard and improve existing network	Inventory intermodal facilities, prioritize new facilities, and recommend improvements*
Basis for decisions	Link trade centers and multimodal corridors	I-81 truck-rail diversion analysis**
Develop freight recommendations		Current and future conditions and needs Corridor evaluation Economic impact analysis Policy review Process framework Outreach program Recommendations

\* As mandated by Virginia General Assembly SB 412  
 \*\* As mandated by Virginia General Assembly HB 1581

The Study will compile available information – which exists in multiple places, from multiple sources – and fill in gaps, to tell the story of the Virginia’s entire intermodal freight transportation system. The Study will identify current needs and projected future needs for each mode, and for the system as a whole. The Study will develop a crucially needed understanding of the contributions that freight makes to Virginia’s economy, and the real economic benefits and costs of improving – or failing to improve – Virginia’s freight transportation system. The Study will develop substantial, implementable recommendations and solutions for state planning and programming; moreover, it will address the critical roles that other levels of government and the private sector can and must play. Finally, the Study will be grounded in a comprehensive outreach effort that reaches a full range of public and private stakeholders, to promote sound recommendations and effective buy-in.

## ■ Technical Approach

This Scope of Work for the Virginia Statewide Multimodal Freight Study reflects a phased approach. **Phase I Task Elements** focus on outreach, data collection, baseline forecasting, and system inventory/analysis tasks. **Subsequent Phase Task Elements** address future conditions scenarios and alternatives, new tools and analyses, program and action recommendations, and continued outreach. The basic framework consists of the following major task areas.

### Phase I Task Elements

- 1. Initial Coordination and Outreach.** A program of initial coordination (among public agencies) and outreach (with private sector stakeholders and the general public) will be developed and implemented throughout the course of the effort.
- 2. Status Review and Fast-Track Action.** This task will review recent and ongoing freight planning efforts, and identify opportunities for fast-track actions to advance the Commonwealth’s freight objectives.
- 3. Data Collection and Analysis.** We will compile existing data from the Virginia DOT (including the data purchase from Global Insight) and other Virginia modal agencies, along with other available Federal, regional, and local data into a geospatial freight database. We will then perform data analysis using available methods and tools, including the Cambridge Systematics FreightTools<sub>CS</sub> software package.
- 4. Baseline Futures.** VDOT’s TRANSEARCH database includes a set of future forecasts by mode, commodity type, and origin-destination pair. Forecasts are also available from other sources. We inventory and compare the available forecasts and develop “synthesis” baseline future forecasts to be used in Tasks 5 and 6.

5. **Statewide Freight Transportation, Economic, and Industry Profile.** We will develop a Statewide Freight Profile documenting the movement of goods by commodity, mode, and geography, the underlying economic drivers of these goods movement patterns, and the overall economic importance and value of freight movement to Virginia. We will address current and projected future conditions.
  6. **Freight System Condition, Performance, and Need.** The State's critical freight transportation system – its truck routes, rail mainlines and terminals, marine terminals, air cargo facilities, and pipelines – will be defined, described, and mapped. Attributes to be described will include: physical location and extent; type of cargo; type and number of vehicles/vessels handled; ownership; major operators/carriers/customers; physical condition; connections with other modes; volumes; capacity and quality of service; safety and security; key trends and future forecasts; regulation, management, and enforcement; and identified bottlenecks, chokepoints, issues and needs. We will rely on the results of Tasks 1 through 4 and existing data and analytical tools (regional and state transportation models, etc.) for these assessments. We will address current and future conditions.
  7. **Inventory of Programmed / Planned / Potential Freight Improvements.** We will assemble information on programs, plans, concepts, and suggestions for freight improvements. This will include statewide, regional/MPO, and local planning documents, facility plans, and stakeholder input.
  8. **I-81 Truck-Rail Diversion Analysis.** Consistent with the intent of Virginia General Assembly HB 1581, we will perform an analysis of I-81 truck-rail diversion potential. The approach consists of five major elements: 1) review and summary of prior work efforts by VDOT, NS, and consultant team members; 2) coordination with NS (which is conducting an internal study) to ensure that such work addresses the issue areas of HB 1581; 3) independent review and validation of NS study findings; 4) public benefits evaluation; and 5) identification of unresolved issues requiring further investigation.
  9. **Analytical Needs Statement and Action Plan for Subsequent Phase Task Elements.** Based on the results of Task 1 through 8, we will inventory available freight data and analytical tools, such as regional and state transportation models, cost-benefit tools, etc. We will develop options and recommendations for enhancing these tools which could be implemented as Subsequent Phase Task Elements. We will then develop an action plan and needs statement for Subsequent Phase Task Elements of the Virginia Statewide Multimodal Freight Study, based on the anticipated task structure outlined below and modifications suggested by Phase I results.
  10. **Phase I Deliverables.** Major findings will be compiled into a final Phase I Report and Appendices, Phase I Executive Summary, and Phase I Presentation.
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#### *Subsequent Phase Task Elements*

11. **Continuing Coordination and Outreach.** The Phase I program of coordination and outreach will be continued and extended to meet study objectives and facilitate successful outcomes.
  12. **Freight Transportation Futures.** Beyond the “baseline” future forecast, there are a broad range of factors that could lead to faster or slower growth in certain commodities, corridors, and modes. We will document the range of plausible “what if” factors and develop corresponding forecast ranges to represent the spectrum of most likely future conditions.
  13. **Implementation of Freight Data and Analytical Tools Enhancement.** This task will implement the recommendations of Task 8. Potential actions could include: supplemental truck studies (counts, surveys, field observations); enhancement of the Virginia Statewide Model (VSM); enhancement of three regional highway models (Northern Virginia, Richmond, Hampton Roads); development of a rail network level of service analysis tool; development of a benefit-cost estimation model; development of a freight improvement prioritization tool; and/or enhancement and licensing to VDOT of the Cambridge Systematics FreightTools<sub>CS</sub> software package. These enhancements would be “leave-behinds” to serve as continuing resources for VDOT, and to facilitate the performance of other Subsequent Phase Task Elements.
  14. **Impact of Freight Transportation Futures on System Condition, Performance, and Need.** This task will update the findings of Task 6 to reflect the alternative Freight Transportation Futures (from Task 12) and the utilization of enhanced analytical tools (from Task 13).
  15. **Potential Freight Solutions.** Looking at the freight transportation system's current and potential future needs including major bottlenecks, we will develop an inventory of potential responses – improvements to capital infrastructure, operations, information systems, land use, regulation, business practices, and partnership opportunities. Responses will address current and future system needs across all modes. This will include, but not be limited to, the opportunities for freight improvements identified as part of Task 6. Consistent with the requirements of Virginia Assembly HB 1581, I-81 truck-rail diversion will be one of the potential freight solutions. At this point, we envision that solutions would be grouped by type: local/regional solutions, corridor solutions, and statewide solutions. The goal is to come up with a “long list” of potentially feasible and beneficial projects, strategies, and approaches for further consideration.
  16. **Methodology to Evaluate Potential Freight Solutions.** Based on VTrans and other input, we will develop a set of performance metrics and associated methodologies to evaluate the benefits, costs, and overall utility of potential solutions. We will consider costs and benefits to the Commonwealth as a whole, as well as to regions and localities. We will also consider a broad range of transportation benefits (congestion, travel time and delay, accidents), economic benefits (transportation and shipping costs, support for economic activity and development), and environmental benefits
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(emissions, minimization of vehicle miles of travel, community and corridor impacts, etc.). We will also consider how costs and benefits could be differentially allocated between private and public sectors.

17. **Testing of Potential Freight Solutions.** We will apply the benefit-cost methodology (Task 16) to the potential freight solutions identified (Task 15), working with the ideas of local/regional solutions, corridor solutions, and statewide solutions. This will be an iterative process. Initially, we will look at individual solutions under baseline future conditions to see if there are “clear winners.” Next, we will look at these solutions under alternative future conditions to see if their utility becomes greater or less as our vision of the future changes; solutions that remain “clear winners” under the broadest range of alternative futures will be identified as high-priority opportunities. Next, recognizing that many solutions will work best as part of packages, we will formulate a set of potential programs that combine different solutions. These packages could be oriented around financial targets, modal preferences, public-private implementation potential, or other policy choices. Finally, the different packages will be tested against alternative future conditions to determine their program-level benefit-cost.
18. **Prioritized Recommendations.** Based on the results of Task 17, we will develop a recommended set of solutions and programs, prioritized by benefit and phase.
19. **Funding.** The availability of funding to implement these recommendations will be determined. We will consider current programs and sources at the local/regional, state, and federal levels, public-private partnership opportunities, user-based/facility-based financing, and the need for additional funding sources to fill remaining gaps if any.
20. **Implementation and Action Plan.** Prioritized recommendations are expected to include a mix of infrastructure, operations, and policy elements. We will develop an action plan listing the prioritized recommendations, identifying implementation leads and involved stakeholders, and laying out next steps to implementation.
21. **Planning Process Framework.** We will document how freight planning is currently performed in Virginia, noting the roles and responsibilities of different stakeholders, the processes for identifying and implementing freight improvements, etc. We will evaluate strengths and weaknesses of current process and develop recommendations for a planning process framework to guide continuing freight planning by the Commonwealth and its many freight stakeholders throughout the implementation period covered by the Action Plan.
22. **Special Research and Analysis.** Other special research and analysis tasks may be defined as Subsequent Phase Task Elements. These could include: input to Assembly sessions; inputs to facility master plans and local/regional transportation plans; input to statewide planning and capital programming efforts; input to multi-state corridor planning efforts; and/or “quick response” to emerging issues and opportunities.
23. **Deliverables.** A series of clear, concise, comprehensive, and “reader-friendly” interim and final deliverables will be produced. Subtask deliverables will be prepared for

each element. Major findings will be compiled into a Final Report and Appendices, Executive Summary, and Presentation.

**Virginia Freight Advisory Committee Members**

**Chick Rosemond**

Vice President Sales and Marketing  
Wyatt Transfer, Inc.

**Matthew Tucker**

Director  
Department of Rail and Public  
Transportation

**Dr. Rob Martinez**

Vice President of Business  
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**Robert Bray**

Executive Director  
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**Griffith Lynch**

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Southern Environmental Law Center

**David Ekern**

Commissioner

**Statewide Multimodal Freight Study  
Outreach Plan Summary**

<i>Stakeholder Groups</i>	<i>Phase I Input</i>	<i>Phase II Input</i>	<i>Recommended Approaches</i>
1. Project Steering Committee (VTrans Multimodal Group)	Overall study management	Overall study management	Regular meetings
2. Freight Advisory Committee (already established by VTrans)	Higher-level system-wide input on selected study tasks - fast track action, system condition/ performance/ need, experience of the system (bottlenecks, logistics chains), forecasts, and Phase II scope  Additional input from NS specifically related to the I-81 rail diversion analysis	Higher-level input and feedback on Phase II recommendations and findings, including recommended projects	Regular meetings  Follow-up Multimodal Office initial request for input from VFAC members  Meetings with NS and its consultant to coordinate on I-81 study issues

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3. Freight Industries (other than VFAC)	From selected industries - major <u>national</u> and <u>statewide</u> shippers, receivers, carriers, and facility operators, plus <u>Virginia industry associations</u> - input on fast track action, system condition/ performance/ need, experience of the system, and forecasts  From other industries - those which are representative of specific <u>market niches</u> or <u>Virginia subregions</u> - input on fast track action, system condition/ performance/ need, experience of the system, and forecasts	Industry input and feedback on Phase II recommendations and findings	Complete approximately 24 interviews with selected industries - major <u>national</u> and <u>statewide</u> shippers, receivers, carriers, and facility operators, plus <u>Virginia industry associations</u>  Virginia's 14 MPOs to conduct 10 interviews each (by phone and/or in person) with other industries, focusing on <u>major employers</u> and industries representative of specific <u>market niches</u> or <u>subregions</u> ; the intent is to leverage project resources, while assisting MPOs in developing freight

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<i>Stakeholder Groups</i>	<i>Phase I Input</i>	<i>Phase II Input</i>	<i>Recommended Approaches</i>
			expertise and fulfilling goals to address freight issues.
4. Public Agencies (other than Steering Committee)	<p>From <u>state agencies</u> - overall coordination, input on system condition/performance/need</p> <p>From <u>MPOs</u> - local freight interviews, input on system condition/performance/need</p> <p>From <u>selected PDCs and local jurisdictions</u> - input on system condition/performance/need, input to I-81 rail analysis</p>	Public agency input and feedback on Phase II recommendations and findings	<p>Initial meetings and/or phone interviews with <u>state agencies, MPOs, and selected PDCs and local jurisdictions</u>, either individually or in groups</p> <p>Follow up meetings/ interviews with selected agencies as appropriate during Phase I</p>
5. General Public	General comment as desired	Structured input and feedback on Phase II recommendations and findings, including recommended projects	For Phase I, which is focused on data collection and analysis, web-based general public input and focused stakeholder interviews and meetings are the preferred

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<i>Stakeholder Groups</i>	<i>Phase I Input</i>	<i>Phase II Input</i>	<i>Recommended Approaches</i>
			methods. Phase II will feature a series of open public meetings to review the Phase I results and provide critical input.