

# Capstone Project Assignment – Freight Bottlenecks

## *Scenario:*

You are the freight unit of your state's department of transportation. Your duties include capital investments in public infrastructure, regulation and enforcement, operation of some facilities, working with the economic development agency to retain and attract businesses, and interfacing with several independent transportation agencies that are specifically tasked with running the port, airport and the one of the major highways.

Your state is home to a large international port, an airport with domestic and international service, several major distribution center clusters, and a number of key manufacturing plants (including an auto production facility). Agricultural production continues, though farm land is under increasing pressure to be developed for other purposes. There are three major urban areas (one of which also contains the port and airport), along with a mix of suburban and rural areas. The population is growing, and new suburban residential, retail, and office developments continue to spring up further and further from the core cities, along major highways and arterials. Communities of newly migrated and underemployed individuals exist, primarily in the urban areas.

Your state has two national Class I railroads and several short line railroads, along with unused but available rail rights of way. New passenger rail service is under consideration for some of the existing rail freight lines, along with at least one of the available rail rights of way. Some coastal sites are in use or available for barge and other maritime movements. Transit service exists throughout most of the urban areas, with rail and bus service to some of the suburban communities.

Highway congestion is growing at an unprecedented rate, causing serious concern for residents and shippers alike. There are two major highways where the problem is particularly difficult, with traffic backed up for a total of 8 hours per day. Both highways are critical transportation spines in your State. Congestion is affecting the competitiveness of the port, as well as increasing the amount of time necessary to move goods between the port and major distribution centers and manufacturing clusters. The highway congestion, along with older bridges and tunnels in the more urbanized areas, has also affected the movement of goods to these areas

Rail freight service also faces hurdles - one major route is already over capacity and other routes have multiple at grade rail crossings, some in residential communities.

Recently a group of residents has become increasingly vocal about the increase of truck traffic coming through their neighborhoods, as the trucks try to avoid the highway congestion. The residents cite noise, air quality, and safety for their children as their main concerns. They are well organized, and have found some friends in the state legislature willing to champion their cause.

Another group has formed to voice concern about increasing rail traffic. Their concerns include the at grade rail crossings, noise, and the movement of solid waste and hazardous materials. They do not want to see rail freight traffic increased in their residential areas.

The owners of the two largest distribution centers in your state and the auto production facility have also started to complain to your team. They have told you that the highway congestion is

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severely comprising their business, and making it nearly impossible to meet their delivery time and goals. The owners have implied that they are looking for opportunities in nearby states for relocation opportunities. They have informed the Governor's office of their intent and the negative implications of losing these major tax and employment bases has become a priority concern.

Fiscal conditions are tight. The state has a deficit, traditional funding mechanisms are stretched, and the amount of federal funding anticipated in the near term is unknown.

***Your Assignment:***

The DOT commissioner has turned to your team to develop a plan for resolving these issues, with both short- and long-term actions. She has asked that you create a plan that details the actions, and is looking for a longer term policy that, if adopted, could reduce the opportunities for this type of situation to occur again. You must involve the other transportation agencies in your plan. Your proposal needs to answer the following questions:

- How will you reach out to and engage the private sector and the public? Who will you include in this conversation and how?
- How will you work with other public agencies?
- What background information will you collect to paint the picture of the current situation? Where will you get this data? How will you present it?
- What will you propose to the commissioner and other decision makers as a solution that will solve the immediate problem for all parties involved?
- What actions could be proposed and how will you arrive at them?
- How will you address the funding needed for the recommended actions?
- What policy recommendations will you make that could alleviate similar situations in the long-term?

***Product:***

Be prepared to present your recommendations and answer questions on it at the Annual Meeting of the I-95 Corridor Coalition. Each capstone group will give a 30 minute PowerPoint presentation. The group of presentations will be followed by 90 minutes of group Q&A and discussion with an outside panel of public and private sector representatives. You are also required to compile your findings and recommendations into a final report (about 10 pages in length), due at the time of presentation. The report should be prepared as an executive briefing document that would be given to the DOT Commissioner and Governor's Office.

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HYPOTHETICAL

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# The Freight Academy

## Freight Bottlenecks Industry Report & Plan Executive Briefing



I-95 CORRIDOR  
COALITION

PREPARED FOR  
I-95 Corridor Coalition

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HYPOTHETICAL

## I. Introduction

Freight and the movement of freight is one of the key economic drivers in this state. This state is strategically located in one of the largest consumer markets in the nation, and the state and regional economy are heavily dependent upon this industry. However, as the cost and frequency of transporting goods continues to rise, the highway capacity and infrastructure supporting freight movement continues to diminish. This State is headed towards a full blown “freight crisis” that will directly impact this region’s economic future, making the state less attractive to new businesses while potentially driving citizens and businesses out of the state, and reducing the State’s competitive edge. This crisis is real and the State is in a crucial period where difficult, but necessary decisions are needed to bolster the freight industry and provide infrastructure which supports efficient goods movement over a variety of transportation modes. Failure to address this situation will result in the additional exodus of companies and jobs and further degradation of the State’s overall economy.

## II. Objective

The governmental transportation agencies at the statewide and local level have the responsibility of infrastructure development and must lead the charge in rectifying this growing freight mobility problem. Private industry and the market cannot address this crisis independently. Strategic governmental leadership is needed to assemble the stakeholders to discuss, plan and implement needed improvements to the system and operational conditions and to establish an improved, strategic transportation planning process that will prevent a reoccurrence of this crisis.

Implementing the action items outlined in this Executive Briefing will help lead the State out of the current crisis and towards a solid economic and transportation efficient future. It is a tactical plan with both short and long-term action steps which will serve as a foundation for actions in support of an improved transportation system, freight industry and quality of life for our citizens. It includes a framework (with implementation timetables) which identifies and prioritizes infrastructure improvement strategies and projects to address the challenges of freight movement in the Region. This plan also provides a profile of the state’s current infrastructure challenges, specifically the negative impact of freight bottlenecks, and offers short and long-term recommendations to remedy the immediate crisis and reduce the opportunity for such a reoccurrence. In particular, this plan includes:

- An inventory of the freight industry and issues being addressed
- A description of outreach and stakeholder coordination
- A list of recommendations to address multilevel needs
- An outline of the roles and responsibilities of the Freight Unit

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### III. Freight Industry Profile and Issues

Our State is fortunate to have a freight infrastructure that serves shippers by highway, rail, sea, and air. We have one of the largest nationally important seaports; but some of the oldest transportation infrastructure in the country. In addition, our State is home to a large warehousing industry that distributes goods to an extensive consumer market.

The key freight industries include:

- The International Port
- Multiple Distribution Centers
- Manufacturing (incl. auto production)
- Agriculture (w/ development pushing in)
- Private Rail (Class I and short lines)
- Solid waste transfer facilities

Over the last decade, we have observed a disproportionate increase in highway congestion that is significantly impacting the efficient movement of goods. This section describes the various goods movement infrastructure in the state and some challenges we have as a result.

#### **Freight Industry Data**

We conducted a quick but comprehensive survey of existing public and private data to develop freight movement profiles. Several sources of data have been used to develop the following freight profile for the State. These sources include commodity flow data which shows the type and amount of goods traveling into, out of, within and through our State; cargo tonnages handled by the State's key Port; congestion levels along key freight corridors; and statewide-classified truck counts. This data was provided by the State Transportation Department, the Port, and by private data sources.

#### **Highway Profile**

The highways in our State are diverse and not planned in coordination with comprehensive plans. They evolved over time in response to the development of the region over the last one hundred years. Development has been allowed to grow without consideration of the impacts to traffic and some are considerably overcapacity. The two major highway spines of our State (H-1 and H-2) experience recurring congestion, with traffic backed up for a total of eight hours each day. The congestion is particularly acute on these corridors which carry 50% of the traffic in the state's highway system and are critical for ensuring efficient movement of people and goods. More specifically, these two highways are particularly important to the Port operations, the major distribution centers and the manufacturing operations of the port region and travel-time reliability is

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relatively low. Included in the highway picture are aging bridges and tunnels where state maintenance has declined.

Issues:

- Highway congestion through our region is growing at an unprecedented rate. As a result of this congestion, Port competitiveness is being impacted, as well as movement of Port goods to nearby distribution centers and manufacturing clusters.
- Narrowing of lanes (from three to two) between exits X and Y creates a system chokepoint.
- Aging bridges and tunnels in the more urbanized areas have affected the movement of goods.
- The congestion is also having a detrimental impact upon the region's air quality and environment.

### **Rail Profile**

Our State is serviced by two Class I railroads, several short line railroads, and also contains some unused but available rail rights of way. Of the two Class I railways, one (R-1) is over capacity. The second line (R-2) is functionally obsolete and has restricted height and weight issues that do not enable it to handle "doublestack" containerized rail movements or industry standard weight rail cars. All the routes have multiple at-grade rail crossings, many in residential communities.

In addition, the region is concerned about highway congestion, which may affect rail freight movements. There is a strong interest in expanding passenger rail services in an existing freight corridor, which will only diminish capacity, if no additional right of way is acquired. Passenger transit services exist in all the urban areas and there are some rail services through the State that include the suburban areas.

Issues:

- Rail freight service is constrained and our rail links are already over capacity.
- Low clearances on key bridges and at four at-grade crossings create potential safety hazards.
- Freight rail must compete with passenger rail service.

### **Port/Waterway Profile**

Our State is home to a large international port, several small private barge and shipping operations, and nearby coastal sites that are amenable to barge and maritime movements. One of the state's three major urban areas contains the Port as well as the International Airport. With highway and rail congestion in the region increasing, the present and future of the Port's competitive position is adversely affected. Available dock sites could provide an opportunity for increased short-sea shipping freight movement.

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Issues:

- Congestion on the highway system and constraints on the rail network have slowed the efficient movement of goods to and from the Port's facility. Port facilities are currently served by one two-lane road and a single railroad.
- The Port Authority's investment in technology and improved internal circulation of truck/train movements have not been matched by a corresponding State investment in "outside the gates" infrastructure.

### **Air Cargo Profile**

One major domestic and international airport is located in the State. As previously noted, the airport is located in the same major urban area as the Port. This airport has cargo services which generally haul higher value, lightweight products such as electronics and medical equipment that require fast delivery across the country.

Issues:

- Highway congestion is also affecting the movement of time-sensitive goods into and out of the airport.

### **Distribution Centers and Warehouses Profile**

Our State also is home to several major distribution centers and manufacturing plants, including an auto production facility. The State also includes a number of farming and agricultural businesses however, farmland is increasingly being swallowed up by suburban development and this industry is dwindling.

Issues:

- Warehouses and distribution centers are not located close to the Port.
- Warehouses and distribution centers are being built further from the port and on "green" fields.
- The location of these warehouses and distribution centers is having an impact on the condition and functionality of the highway infrastructure as goods are traveling further distances on an already stressed highway system.

### **Critical Freight Corridors**

Our State's freight industries are served by several critical freight corridors. The corridors are defined by the Class I and II rail freight system, the National Highway system and additional roads supported by the Federal Highways Freight Analysis Framework. As determined by the Public-Private Freight Stakeholder group, the freight critical roads are generally defined on a throughput threshold by the number of freight businesses, number of trucks, or a percentage of trucks basis.

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## IV. Outreach and Coordination

### a) **Outreach Process and Structure**

A series of stakeholder and public outreach meetings and workshops were held to draw relevant input from the various affected groups. The meetings were facilitated by all affected agencies and tailored to the specific perspectives at hand. Public outreach involved respective region's MPOs (Metropolitan Planning Organizations), business community, and the general public at each of the three major urban areas of the state. Smaller freight stakeholder workshops included truck, rail, port, air and major manufacturing representatives.

At each of the meetings, staff presented the DRAFT Freight Bottlenecks Industry Report and Plan and reviewed the critical freight issues and potential short and long-term solutions. Feedback from meeting attendees (both verbal and written) has been captured and prepared into an Outreach Summary Memorandum.

### b) **Stakeholders and Issues**

In addition to the general public feedback, two highly organized residential groups provided very specific concerns regarding their respective neighborhoods. One group was deeply concerned about increasing truck traffic through their neighborhood and cited the negative resulting impact of increased noise, poor air quality and worsening safety for their children. A second group was concerned about rail traffic and the impact that increased freight rail congestion would have on their neighborhood. In addition, an established business group representing the interests of commodity distribution centers was sought out and provided significant feedback. Stakeholder concerns covered many of the freight issues that will be expanded upon in the next section.

Stakeholder Coordination: The Freight Unit outreach staff was also responsible for managing coordination with other agencies as the Plan was developed. They sought feedback from the following stakeholders to ensure that their voices were heard in the planning process:

- MPO transportation planning representatives
- Multiple Chambers of Commerce
- State Highway Administration
- State Police
- State Management and Operations
- State Rail Administration
- State Port Authority
- State Aviation Administration

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- State Environmental Resources Department
- State Department of Commerce (Economic Development Agency)
- Federal transportation representatives (FHWA, FTA, FRA and various Planning and Safety officials)
- Transportation Authorities (toll facilities)
- Regional commuter rail authority
- Private Rail Class I, R-1, R-2, and Rail Shortlines
- Professional, Mode-Specific Associations including the Trucking Association, the Railroads Association of the State, the Port Users Association, and the State Aviation Association
- Private motor carrier companies, drayage providers, shipping, third-party logistics providers, distribution center representatives, and freight forwarders
- Federal, State, and Local Elected Officials and their staffs

Truck Resident Group: Interstate and highway congestion is pushing truck traffic to secondary roads. This group is concerned about the growth in truck traffic traveling through their neighborhood. This group has focused on three issues: noise, air quality, and safety. They have a political leader to help champion their cause in the State Legislature.

Rail Resident Group: This group is concerned about increased rail traffic through their community. The community is already troubled by the existing rail traffic and the noise it brings. With many grade crossings safety is also big concern. Another concern is the movement of solid waste and hazardous materials (HAZMATS).

Freight Business Groups: The owners of the state's two largest distribution centers and the auto production facility have begun to "feel the pain" and have raised significant concerns to the State Department of Transportation about how highway congestion is severely compromising their businesses. Congestion is making it nearly impossible to meet consistent, reliable delivery times which are adversely affecting their bottom-line. These business owners have informed the Governor's office that they are seriously considering relocation to nearby states. The implication of a loss of any of these businesses would mean major tax and employment impacts on the state.

Other freight stakeholders in the business of providing regional truck, rail, distribution center, port and shipper executives were drawn together as an informal public-private discussion group. Members of the State and local transportation agencies met with the group of freight transportation industry partners for several discussion meetings. The following is a list of some of the issues discussed.

- The threat of truck restrictions and increased delays at rail crossings also has them concerned about their ability to meet customers' reliability needs.

- Many of the truck-oriented businesses commented that they are having increased delivery failures and their costs have increased because of the need to hire more drivers to handle the same freight, and are, at the same time, increasingly unable to find qualified drivers.
- There is an interest in participating in the required infrastructure improvement costs, if they had confidence that the additional resources would be spent appropriately.
- The group agreed that private industry needed to consider shifting operations to off-peak hours in order to make the best use of existing capacity in the near-term. Follow-up meetings to discuss this with the regional trade associations are being planned.

#### c) **Additional Outreach Issues**

Transportation congestion is having a negative effect on the region on multiple levels. In addition to the specific citizen concerns noted, land use, transit service, and environmental concerns were raised.

Land Use Concerns: Poor land use planning and transportation coordination is contributing to the congestion problem in the state. New residential, retail, and office developments increasingly sprawl along the highways further from the cities adversely impacting the congestion situation.

Transit Service: Transit service is provided in most of the urban areas; however, service to the suburbs is limited to a few bus routes. This gives commuters little choice but to use their car for all transportation. Growing urban communities of newly migrated and underemployed people are dependent on transit services.

Environmental Concerns: Congestion leads to increased greenhouse gas emissions as well as placing the region into increased regulatory and fiscal constraints due to the federal environmental non-attainment area designation and accompanying restrictions.

## V. Recommendations

The congestion on our State transportation infrastructure has a rollover effect, impacting the competitiveness of the State's and region's commerce. The following recommendations represent an opportunity to address both short-term operational deficiencies and to establish longer-term institutional changes that redirects the State to support and finance an efficient freight system.

The new direction that would be established by these recommendations would be characterized by multi-modal, multi-jurisdictional, and multi-institutional collaboration and cooperation that would achieve the broadest benefit to public and private stakeholders. The recommendations would enhance the movement of both people and

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goods. Additionally, our recommendations are based on the following four guiding principles:

- improving the economic competitiveness of the region and State;
- reducing all forms of transportation congestion;
- improving energy efficiency (and therefore the reduction of greenhouse gas emissions);
- improving the quality of life for our citizens now and in the future;

And, the Plan's recommendations include,

- Institutional Coordination and Leadership
- Operations
- Financing
- Long-Range Planning
- Land Use Planning
- Education, Outreach and Technical Assistance

## **INSTITUTIONAL COORDINATION AND LEADERSHIP**

### **1. Establish a senior-level body to promote logistics as a critical element of the state's economic prosperity**

This state needs a coordinated approach to plan, design, fund, and implement improvements to the freight transportation system in order to sustain the state's quality of life and economic prosperity. Currently, the majority of freight strategies are being advanced independently, thereby resulting in inefficiencies and gaps for advancing a true statewide freight strategy. The creation of a senior-level body will help enact the actionable items outlined in the implementation plan and ensure the success of the overall statewide freight mobility strategy. The highest priority must be given to the creation of a senior-level body created by Executive Order of the Governor to champion freight issues.

The proposed senior level body, once created, would spearhead the following general activities:

- Develop the overall logistics/economic development strategy for the state.
- Monitor implementation and ensure timely completion of designated projects, programs, and initiatives.
- Advance priority strategies bundles (i.e., groupings of programs, projects, and initiatives that must be advanced across multiple state agencies, authorities, and the private sector.)

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- Work with the Port, MPOs, and local jurisdictions to develop a program oriented towards tying warehouse development and the international marine cargo movement closer together. Encourage the reuse of appropriate underutilized and brownfield sites in urban areas for new value added distribution center development. This will relieve pressures for expansion elsewhere in the State and outside the State.
- Identify and advance leveraged funding opportunities utilizing individual agency bonding and funding mechanisms; local, state, and federal programs; and private sector investments and fees.
- Identify regulations, policies, and procedures that can be administratively implemented, adopted, amended and/or abolished that are in support of the intent of the Executive Order and identify those actions that will require further legislative action.
- Ensure involvement and close coordination among the state and regional agencies, private sector, and local communities as appropriate at each stage of implementation.
- Conduct a monthly business roundtable with the top 10 business leaders in the state to generate ideas on improved communication, data sharing, and creative ways to solve problems.
- Develop and deploy educational campaigns to create public and private sector awareness of the roles of goods movement in their daily lives and the contribution of the logistics industry to the state's economy.

## **OPERATIONS**

### **2. Advance mode-shift strategies**

Trucks are the predominant mode in moving freight, and are operating on an increasingly congested highway network. Increasing the use of other modes to move goods is a sound compliment to strategies designed to address future highway congestion. Several strategies should be pursued for their ability to move more freight off of our highways and onto other modes.

- a. **Evaluate the use of sprint trains and rail shuttles, both within and outside of the State.**
- b. **Advance the use of rail shuttles between the port and key warehouse and distribution center nodes.** Completion of on-dock rail facilities should also be a priority.
- c. **Encourage the use of rail freight and barge options.** This can increase the efficiency of the overall inland distribution system. However, it must have sufficient capacity and be made economically viable to perform that role.
- d. **Expediently advance planned investments in the state's rail freight network aimed at removing operational bottlenecks and increasing system capacity.**

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### 3. Advance time-shift strategies

There is a significant advantage to be gained in improving the efficiency of moving goods by highway if the operating hours can be adjusted, thus utilizing the available off-peak period roadway capacity. Trucks will be better able to take advantage of the off-peak capacity, and will face less competition for the use of facilities from auto traffic. Although hours of operation is a private industry business decision, providing incentives for changes in the travel behavior of the freight industry could reap significant benefits in overall transportation operations. While the market forces themselves may ultimately lead to this strategy, relief is needed now for the current crisis. Legislation that requires such operations or an incentive to those who do would provide some immediate relief to this situation. As such, this state needs to propose and promote legislation that will provide incentives to encourage off-peak freight operations. Advancing such a program will require the cooperation of the port operators, warehouse / distribution center operators, the Trucking Association, and local governments.

One strategy to advance this recommendation is to test its affect by implementing it on a trial basis in a test market. The Port and maritime cargo facilities provide a concentrated and well-defined test market. This report recommends that the state test the concept of extended hours of operation or other time shift strategies at our maritime cargo terminals. There are substantial benefits to supporting maritime terminal time-shift strategies. Programs such as extended gate hours and the PierPass program in southern California have successfully encouraged the use of existing roadway capacity during less congested off-peak periods. If this strategy can be made to work at the port and maritime facilities, the concept can then be expanded to a broader statewide initiative.

### 4. Develop specific infrastructure and operational action plans for the priority freight corridors

While the mode shift and time shift strategies discussed above will help address some of the existing congestion and efficiency issues presented in Section IV above, significant investment in the infrastructure itself will be required to address operational problems in the system and to have an affect upon congestion in the longer term. In order to address this, it is recommended that an infrastructure and operational plan be developed for the states priority freight corridors. This plan should strategically focus on the state's critical freight corridors and define what improvements are needed, physical and operational, along each of those corridors to address the state's "freight crisis".

## **FINANCING**

5. **Seek Maximum Federal Participation and Funding due to the National and Regional Significance of this Area:** Finding resources to add rail track to existing right of way to open up capacity.

6. **Develop attractive public-private partnerships to leverage finances needed to make short-term improvements:** Also, identify and use performance measures to show private investors (and the public) the return on investment and expedited delivery of projects.
7. **Seek state legislative approval of dedicated discretionary funding for addressing short-term operational deficiencies (i.e., vertical clearances, turn lanes at warehouse entrances, etc.):** Selection of these projects would be subject to an independent prioritization process (including criteria and adherence to freight efficiency goals) and the State DOT would provide an annual accomplishments report to the legislature.

## **LONG RANGE PLANNING**

### **8. Develop a long range comprehensive Statewide Freight Plan**

Stakeholders involved in the development of this Plan reported that transportation planning, as a whole, needs to be improved. An effective statewide long-range freight transportation planning process will be guided by strategic goals as established by the executive leadership of the State. It will also be effective if it is coordinated between modes, agencies, and both public and private stakeholders. This recommendation proposes that long-range freight transportation planning should involve the following.

- Steered and coordinated by a dedicated transportation policy leadership team
- Involves public and private stakeholders
- Establish and set appropriate transportation and economic goals
- Data collection that effectively and realistically projects the transportation and economic trends of the state and sub-regions
- The development and use of a statewide travel demand model to conduct cross mode and intermodal analysis scenarios
- Develop a series of system-wide performance measures (baseline and targets) to ensure future projects meet the mobility and safety goals of the State DOT
- Needs to work in tandem with other capacity enhancing efforts, such as
  - A comprehensive mass transit network
  - New passenger rail under consideration for some freight lines

### **9. Develop a more coordinated mechanism for the planning and management of the rail system**

A more coordinated mechanism for the future planning and management of the rail system is necessary. This process should:

- Identify overlaps and/or conflicts among previously proposed improvement programs, classify additional critical chokepoints, and identify critical capacity constraints beyond the state's borders.
- Systematically assess the rail network to establish goals for basic standards for weight-carrying capacity and height/width dimensions that should be adopted across the state's rail network.
- Address at-grade rail crossings and the safety and operational issues occurring at these locations.
- Facilitate the identification and resolution of passenger-freight rail operating and program support conflicts on lines where new or expanded services is being considered.

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- Provide a forum for institutional coordination and cooperation and increased dialogue among Class I and short line railroads, passenger rail service operators, and the users of these services regarding operational issues.

## **LAND USE PLANNING**

### **10. Engage with local stakeholders to encourage the coordination of Land Use Planning at a more regional level and begin to incorporate applicable Freight Planning elements into those plans**

As land use planning is managed by local jurisdictions within the comprehensive planning process, the State recognizes the influences that affect land use decision-making. However, as transportation infrastructure revenues continue to diminish in proportion to the needs, any plans for a sustainable transportation system must also include sound land use planning, policies and decisions. The freight industries network is no different. In order for this state to accommodate future growth and economic development, this state must become smarter in the way that it addresses land use planning for the freight industry. Failure to do so will result in a continued out migration of jobs and population. This report recommends that the state address the land use planning side of this issue by implementing the following strategies:

- Develop, incentivize, and guide site location strategies for future companies. Consider brownfield sites and locations where adequate, intermodal transportation capacity exists (or can be built without expensive right-of-way).
- Provide incentives to develop on brownfields by subsidizing clean up efforts.
- Determine the most strategic location(s) for a new intermodal terminal to help facilitate better truck to rail car (and vice versa) moves.

### **11. Determine where future warehousing and distribution center facilities can best be located within the state**

From an economic development perspective, it is better to encourage warehouse and distribution center development within the State rather than have the facilities and associated jobs generated outside the State. Working together, public agencies and the private sector must determine where additional warehousing / distribution space can be accommodated in-state.

The reuse of brownfield or underutilized properties is a partial solution to this problem. While the continued use of “greenfield” sites near existing warehouse clusters is also anticipated, as land becomes more expensive and/or less available, these warehouse developments will shift outward. The objective of this strategy is to maximize the economic development benefits accruing to our state as a result of the concentration of freight activity in the state. This should be done in close cooperation with industry associations, property owners, developers, and localities.

**12. Explore modal options to support warehouses and distribution centers (DCs), individually and as part of corridor efforts to better connect clusters with port facilities**

The operation of scheduled, double-stack container service between the state's maritime terminals and key concentrations of warehouses and distribution centers as an alternative to trucking containers to and from these areas should be explored. Rail-based container shuttle service would offer an alternative to trucking containers to and from these areas. Rail shuttles can significantly reduce the amount of truck trips occurring between these facilities and can have significant economic development benefits.

**EDUCATION, OUTREACH AND TECHNICAL ASSISTANCE**

**13. Implement Education, Outreach, and Local Technical Assistance programs**

There is limited public sector knowledge about freight movement issues and as a result, there is limited public discussion of freight policies, programs and projects. The private sector also needs to have a fuller understanding of public sector limitations and actively seek ways to make freight a good neighbor. There are three areas where this gap can be best addressed: Education, Outreach, and Local Technical Assistance.

Education: A multi-agency public/private educational program needs to be created and implemented. The program would use multiple channels to explain the critical role goods movement plays in driving the state's economy, enabling daily activities, and supporting an enhanced quality of life. Additionally, targeted education on themes where the public has an immediate connection is necessary. For example, safety can be a strong element of a targeted campaign. Improving safety requires informed actions by the infrastructure owners, the freight operators, and the general public, especially as users of shared freight and passenger elements of the system.

Outreach: Virtually all freight studies and projects undertaken by public agencies include an outreach component. Private sector entities are increasingly utilizing outreach to minimize the impacts of incorrect information or misconceptions regarding proposed development or expansion of freight activities. We need to ensure that public and private sector entities commit to better coordinating outreach efforts and in explaining how separate projects relate to broader goals.

Local Technical Assistance: There is a need to provide cost effective means for our local governments to address freight issues in land-use and transportation planning discussions. Local municipalities lack adequate guidance and resources to address freight issues in any great detail.

The state and local entities should more fully partner to improve the integration of freight data and analysis into the local planning process. For example, the provision of "best practice" guidance and analytic tools should be developed and widely disseminated to support freight-related activities at the local level – especially in the

areas of land-use development, zoning requirements, operations, and truck and train movement issues.

Optimizing the economic value of freight development in balance with community objectives is a key concept to enable freight industry growth. Sustained and proactive leadership to deliver inclusive collaboration that builds on full articulation of issues from all perspectives is critical to securing local acceptance, and vocal support, of regionally significant or private market driven freight infrastructure, such as in warehousing and distribution facilities.

## VI. Freight Unit Roles and Responsibilities

The Freight Unit is an Office within the State Department of Transportation (DOT). The Freight Unit was established by the Commissioner of Transportation to coordinate various freight related planning, operations, and enforcement activities. The Freight Unit has focused on elevating freight issues. In general, its responsibilities include overseeing capital investments in public infrastructure, industry regulation and enforcement and the operation of certain freight facilities. More specifically, their responsibilities include:

- Identification of capital investments and projects that improve the efficiency of goods movement.
- Dissemination and enforcement of federal and state freight related regulations.
- Oversight and operation of State-owned freight facilities.
- Coordinating with the Economic Development Agency and others in the public and private sector to retain and attract businesses.
- Interfacing with other transportation agencies which operate key infrastructure components (i.e., Ports, Airports, Highways, and Rail).

This unit is responsible for understanding and analyzing the on-going and emerging issues and making recommendations to Senior Management.

In addition to the directive to develop a Freight Bottlenecks Industry Report and Plan for the State, The Commissioner directed the Freight Unit to lead the implementation plan, which follows.

## VII. Implementation Plan

The following Implementation plan will be used as a guide in tracking the progress and results of the consolidated Freight Plan. The State Freight Unit will be responsible for reporting progress to the Commissioner of Transportation.

No.	Title	Responsibility	Duration	Status
1	Establish a senior level body to promote logistics as a critical element of the state's economic prosperity	Commissioner of Transportation State Freight Unit	Short-term Long-term (Permanent)	In-progress
2	Advance mode-shift strategies	State Highway Administration State Rail Administration State Freight Unit	Short-term Long-term	In progress
3	Advance time-shift strategies	PPP-Freight Stakeholder Group	Short-term Intermediate	In-progress
4	Develop specific infrastructure and operational action plans for the priority freight corridors	State Highway Administration State Rail Administration State Freight Unit	Short-term Long-term	In-progress
5	Seek Maximum Federal Participation and Funding due to the National and Regional Significance of this Area	State Highway Administration	Short-term Long-term	In-progress
6	Develop attractive public-private partnerships to leverage finances needed to make short-term improvements	Commissioner of Transportation	Short-term Long-term	TBD
7	Seek state legislative approval of dedicated discretionary funding for addressing short-term operational deficiencies	Commissioner of Transportation	Short-term	In-progress
8	Develop a long-range comprehensive Statewide Freight Plan	Commissioner of Transportation All state transportation agencies	Long-term	In-progress
9	Develop a more coordinated mechanism for the planning and management of the rail system.	State Rail Administration	Long-term	Future
10	Perform Land Use Planning at a more regional level and begin to incorporate applicable Freight Planning elements into those plans.	State Highway Administration State Freight Unit Local jurisdiction	Long-term	Future
11	Determine where future warehousing and distribution center facilities can best be located within the state.	State Economic Development Agency Freight Unit	Long-term	Future
12	Explore modal options to support warehouses and distribution centers (DCs), individually and as part of corridor efforts to better connect clusters with port facilities.	State Economic Development Agency Freight Unit State Rail Administration	Short-term Long-term	In-progress
13	Implement Education, Outreach, and Local Technical Assistance programs	State Freight Unit PPP-Freight Stakeholder Group	Short-term Long-term	In-progress

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# **Capstone Group Project Presentation - Bottlenecks #1**

November 5, 2009

1:15 PM to 2:15 PM

## **Some reminders to make sure the web cast runs smoothly...**

- Please do not put your telephone on hold at any point during the call
- Please mute your telephone line unless participating in discussion
  - \*6 to mute, \*7 to return to talk mode
- Feel free to utilize the chat function for questions, or to indicate that you would like to speak



# ***Agenda***

- Welcome
- Introductions
- Meeting Objectives
- Capstone Presentation
- Questions and Answers, and Feedback

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# ***Capstone Project Freight Bottlenecks - Group 1***

Erik Johnson, Virginia DOT  
November 5, 2009

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## ***Group 1***

**Karin Foster, *Metropolitan Washington COG, TPB***

**Don Hannon, *New York State DOT***

**Erik Johnson, *Virginia DOT***

**Alpesh Patel, *North Carolina DOT***

**Paul Truban, *New Jersey DOT***



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# ***Freight Bottlenecks Industry Report & Plan***

## **Executive Briefing**

HYPOTHETICAL

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# ***OVERVIEW***

- Introduction
- Objective
- Regional Profile and Issues
- Outreach and Coordination
- Action Plan



# ***The FREIGHT CRISIS***

- The cost is rising
- The volume is rising
- Capacity is diminishing
  - Bottlenecks growing
- Quality of life is diminishing



# ***Objective***

- Provide strategic leadership
- Plan and implement improvements
- Establish an enhanced strategic transportation planning process



# ***Profiles and Issues***

## **Key industries**

- International Port
- Distribution Centers
- Manufacturing (incl. auto production)
- Agriculture (w/ development pushing in)
- Private Rail (Class I and short lines)
- Solid waste transfer facilities



# ***Profiles and Issues***

- **Highway**
- **Rail**
- **Port – waterway**
- **Air**
- **Critical corridors**





# *Profiles and Issues*

## **HIGHWAY**

### ***Profile***

- Diverse – not planned
- “Evolved” over time over the last one hundred years
- Traffic impacts not considered in development permitting
- Low Level of Service

### ***Issues***

- The two central corridors experience recurring congestion
- Aging bridges and tunnels
- Air quality diminishing



# Profiles and Issues

## RAIL

### **Profile**

- Two Class I railroads
- Several short line railroads
- Unused but available rail rights of way

### **Issues**

- Constrained service
- Low clearances
- At-grade crossings
- Competes with passenger service



# Profiles and Issues

## PORT

### **Profile**

- Large international port
- Small private barge and shipping operations
- Coastal sites
- Hosted by a Major urban area with an International Airport

### **Issues**

- Congested highway and rail system
- Limited Port access
- One railroad



# Profiles and Issues

## AIR

### **Profile**

- One airport
- Excellent air services

### **Issue**

- Diminishing just-in-time performance
  - *Landside*

HYPOTHETICAL



# *Profiles and Issues*

## **INDUSTRIES**

### ***Profile***

- Warehouse and distribution centers
- Manufacturing
- Agriculture

### ***Issues***

- Increased travel distances
- Losing farmland
- More congestion



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# *Profiles and Issues*

## **CRITICAL CORRIDORS**

- Class I Rail
- Class II Rail
- National Highway System
  - + Intermodal connectors
- Freight Analysis Framework



# ***Outreach and Coordination***

- Stakeholder and public outreach meetings
  - Representatives of the MPOs, business community, and general public
  - Outreach Summary Memorandum



# ***Outreach and Coordination***

## **Feedback - Citizen**

- Increasing truck traffic through neighborhoods
  - Negative impacts: noise, air quality, and safety
- Increased rail traffic and congestion
  - Noise, crossing safety and solid waste



# ***Outreach and Coordination***

## **Feedback - Business**

- Considering relocating
- Unreliable delivery times
- Truck restrictions
- Increased delays at rail crossings
- Increased costs



# ***Outreach and Coordination***

## **Business community commitment**

- Interest in investing
  - Considering time-shifting operations
- Follow-up planned



# ***Outreach and Coordination***

## **Additional Outreach Issues**

- Land Use
- Transit Service
- Environmental





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# ***Recommendations and Action Plan***

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# ***Recommendations***

## **Categories/Groups**

- I. Actions that we can do something about now*
- II. Actions that are urgent and important, but require the agreement and involvement of those outside of our authority*
- III. Actions that will take time, involve others, and will strategically help reduce future crises*



# Action Plan

## Group I (Actions that we can do something about now.)

No.	Action
<b>Institutional Coordination and Leadership</b>	
1	Establish a senior level body to promote logistics as a critical element of the state's economic prosperity
<b>Operations</b>	
2	Advance mode-shift strategies
3	Advance time-shift strategies
4	Develop specific infrastructure and operational action plans for the priority freight corridors



# Action Plan

**Group II** (Actions that are urgent and important, but require the agreement and involvement of those outside of our authority.)

No.	Action
<b>Financing</b>	
5	Seek Maximum Federal Participation and Funding due to the National and Regional Significance of this Area
6	Develop attractive public-private partnerships to leverage finances needed to make short-term improvements
7	Seek state legislative approval of dedicated discretionary funding for addressing short-term operational deficiencies



# Action Plan

## Group III (Actions that will take time, involve others, and will strategically help reduce future crises.)

No.	Action
<b>Long-Range Planning</b>	
8	Develop a long-range comprehensive Statewide Freight Plan
9	Develop a more coordinated mechanism for the planning and management of the rail system.
<b>Land Use Planning</b>	
10	Perform Land Use Planning at a more regional level and begin to incorporate applicable Freight Planning elements into those plans.
11	Determine where future warehousing and distribution center facilities can best be located within the state.
12	Explore modal options to support warehouses and distribution centers (DCs), individually and as part of corridor efforts to better connect clusters with port facilities.



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# Action Plan

## Group III – Cont'd

No.	Action
<b>Education, Outreach and Technical Assistance</b>	
13	Implement Education, Outreach, and Local Technical Assistance programs

HYPOTHETICAL





# Thank you

## ***Discussion and Questions***

HYPOTHETICAL

