

# 1.0 Introduction

The Chittenden County Metropolitan Planning Organization (CCMPO) has recognized the need to incorporate freight transportation planning into the regional transportation planning process. To achieve this goal, the Regional Freight Study was initiated by CCMPO in the fall of 1999. This study encompassed many different but complementary components that have been completed and integrated to form a comprehensive freight study. This effort was undertaken in coordination with the Statewide Freight Study conducted for the Vermont Agency of Transportation (VAOT).

The goals of this study included:

- Develop a better understanding of the freight transportation system in Chittenden County;
- Acknowledge and address public concerns regarding specific freight movement practices;
- Provide data that can be used to preserve and improve the transportation system;
- Expand the tools available for freight planning efforts; and
- Begin to identify and prioritize future investments in the freight transportation system.

## ■ 1.1 Background of Freight Transportation

Over the last decade, public sector planning agencies have begun to recognize the importance of incorporating freight-specific planning initiatives into existing practices. Prior to this, freight transportation planning was a relatively low priority for the public sector. This was due to a combination of factors, including the dominance of the freight sector by private operators, which made public intervention more complicated. In addition, the limited planning resources that were available were targeted toward major passenger transportation initiatives.

This situation began to change due to the emphasis placed on multimodal planning in the Intermodal Surface Transportation Efficiency Act (ISTEA), enacted in 1991, which encouraged states and MPOs to consider freight movements in their transportation planning processes. The subsequent Transportation Equity Act for the 21<sup>st</sup> Century (TEA-21), enacted in 1998, reinforced this movement towards more comprehensive freight and passenger initiatives. The increasing economic competitiveness among states and regions within the U.S. and the globalization of the economy have further increased the importance of a region's freight transportation infrastructure. The deregulation of freight transportation has dramatically changed business practices and created new competitive opportunities across modes. The ever-changing nature of business practices, with an emphasis on reliable, just-in-time delivery (JIT), places a premium on the efficient operation

of the freight transportation system. It also increases the burden on that infrastructure as the inventory that used to be stockpiled in warehouses is increasingly stockpiled in freight vehicles of one kind or another in transit.

The deregulation of the trucking industry, the continued decline of the railroad industry, and the shift of the Northeast economy from manufacturing to services have all combined to dramatically increase truck traffic on the region's roadways. The North American railroads have undertaken many initiatives to improve service to compete with each other and the trucking industry for freight traffic. This has included development and deployment of new technologies, such as double-stack cars, and container- and trailer-on-flatcar (COFC/TOFC) services. These new technologies provide increased economies of scale, faster service, and multimodal coordination. However, the technologies themselves required expensive modifications to the existing infrastructure.

There also has been a continuing emphasis on consolidation among the Class I railroads, including the mergers of Burlington Northern and Santa Fe, the Union Pacific and Southern Pacific, and the split of Conrail between CSX and Norfolk Southern. Each of these mergers was undertaken to make the resulting railroads more competitive in the movement of freight. However, each example resulted in periods of far worse service, which had national and international ramifications. To some degree, these service failures are still being mediated. In fact, the most recent merger attempt by the Burlington Northern Santa Fe and Canadian National railroads was rejected by the Surface Transportation Board (STB).

Many of these railroad trends are exacerbated in the Northeast, including Chittenden County and Vermont, because of the lack of investments in upgrading rail infrastructure and the limited access of competing railroads. As a result, this region faces a situation in which truck volumes are increasing as truck lengths and weights have been growing. This contributes to traffic congestion in a variety of ways. Areas experiencing significant highway traffic growth such as Chittenden County, are working to accommodate increased traffic on a fixed infrastructure. And areas where the physical infrastructure is constrained such as rural roadways and small town centers where large trucks have difficulty negotiating tight roadway geometries, are working to identify projects that will accommodate larger vehicles. In addition, trucks are seen as having major environmental and quality of life impacts. As a result, there are pressures at the local and state levels to limit truck operations.

Globalization of the economy also has changed the transportation and service requirements of shippers and receivers. Manufacturers can serve markets globally, but this requires a greater reliance on and greater efficiencies in the transportation system. Given the proximity of Chittenden County to the U.S./Canadian border, the liberalization of trade with Canada brought about by the U.S.-Canada trade pact and subsequently by the North American Free Trade Agreement (NAFTA), has significant implications for the movement of freight into and through Chittenden County.

Increased reliance on the Internet, e-business and subsequently e-commerce have also impacted freight transportation. Many new Internet-based businesses have set up capabilities to sell products on-line to a global market. The supporting transportation system was overlooked as this new mechanism to reach broader markets was developed. This was shown during the Christmas season of 1999, when a huge increase in demand with-

out the necessary capacity resulted in some companies not being able to deliver products to consumers on or before Christmas Day.

## ■ 1.2 Organization of Report

This report is organized as follows:

- **Section 1.0, Introduction.** This section defines the goals of the study, provides an overview of freight transportation, and describes the organization of the report.
- **Section 2.0, Project Approach.** This section provides a detailed description of how the freight study was undertaken, including descriptions of the tasks and the data collection activities.
- **Section 3.0, Freight Profile.** This section presents general economic and demographic trends and detailed modal system descriptions.
- **Section 4.0, Commodity Flows and Logistics Patterns.** This section presents an overview of the commodity flow analysis completed for Chittenden County and provides descriptions of example logistics patterns for Chittenden County-based companies.
- **Section 5.0, Feasibility of New Intermodal Service.** This section describes the existing intermodal service for Vermont and presents an analysis of opportunities and potential for developing new intermodal services of both traditional intermodal services (double-stack, trailer- or container-on-flatcar) and transload operations (truck to rail or rail to truck operations of non-containerized cargo).
- **Section 6.0, Findings, Conclusions, and Recommendations.** This section provides a summary of the findings of this study and provides recommendations and next steps for freight planning in Chittenden County.