

Local Truck Routing Initiatives

Part I

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[Editor's Note: The following three related papers are by three members of a panel. The papers are designated: Part I, Part II and Part III with the above heading. The papers were presented to the traffic engineers at Road School.]

Across the United States a number of measures have been advocated or adopted to control the movement and effects of trucks. These measures are generally divided into two categories: (1) overall policy measures such as land use regulation, freight distribution methods, and vehicles design, (2) a second category recognizes traffic management improvements, truck bans, and establishment of truck routes. The focus of this panel will be on the second category.

Before I proceed to allow each of the three distinguished panel members to share their expertise and personal views on local truck routing initiatives, I will briefly share my thoughts from a planning perspective on a very insular topic; i.e., dealing with local truck restrictions of hazardous materials transport.

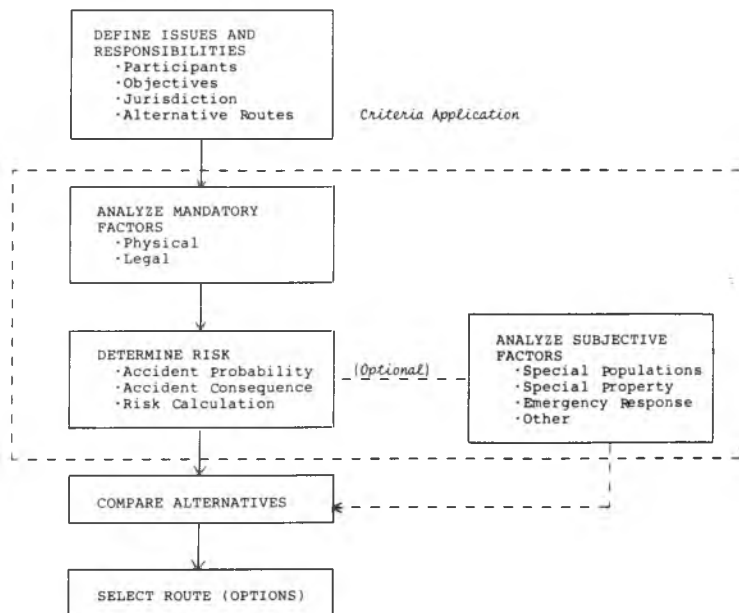
At any given time, 5-15% of all trucks on U.S. roads carry toxic, corrosive, flammable, explosive or otherwise hazardous materials. These cargoes are transported in all kinds of weather through locations that range from uninhabited countryside to densely populated cities. Although these hazardous materials could include spent nuclear fuel, they are, for the most part, conventional materials such as fuels, fertilizers, plastics, and paints.

The Materials Transportation Bureau (formed in 1975) of the U.S. Department of Transportation specifies how hazardous materials must be packaged and shipped but the responsibility for enforcement of truck transport rests with the Federal Highway Administration. Also, certain cargoes have their own overseers, e.g., the Environmental Protection Agency (EPA) holds sway over pesticides and agricultural chemicals. The Hazardous Materials Transportation Act (1974) attempts to consolidate these responsibilities but its enabling legislation is very complicated and a dozen states have not incorporated the act into their codes. In January 1985, the State of Indiana incorporated the act into its code.

State inspection programs too, are reminiscent of swiss cheese. Also, it is important to recognize the extent of the hazardous materials accident problem. Major contributors to such accidents are human error, environmental conditions, container flaws, and equipment failures.

Although eliminating hazardous materials accidents is a worthwhile goal, it must be emphasized that industry has been doing a commendable job in transporting these hazardous commodities. Fatalities associated with hazardous materials transport comprise approximately 0.03% of all highway fatalities.

Much attention has been given to designing the optimum routing method. The most widely recognized of these methods is the one developed by the Federal Highway Administration (Figure 1). This



SOURCE: U.S. Department of Transportation
Federal Highway Administration

Figure 1. Hazardous Materials Route Selection Process

method is designed to identify and evaluate roadway and community characteristics that make one route safer than another when transporting hazardous materials. It involves identifying highways where accidents are less likely to occur resulting in less severe consequences if accidents do occur. The method further allows persons with little or no knowledge of hazardous materials shipments or transportation planning to conduct their own analysis.

As a transportation planner I am committed to the goals of minimizing response time setbacks and ensuring minimal traffic flow disruption during an emergency condition. Potential problems and their possible effects on such subjective factors as watersheds, reservoirs, hospitals, churches, and schools that reflect community priorities and values must be anticipated and solutions developed prior to their occurrence.

Most hazardous materials incidents are of a minor nature. They can be handled by the people and equipment at hand. But even a minor incident may become a catastrophe which can tax resources to the limit, or beyond, especially if proper planning has not been done. There are numerous examples of bad decisions based on inaccurate or inadequate information—information that planning could have provided.

An excellent example of a potentially dangerous situation rendered under control from the start took place recently in Floyd County (Indiana) during rush hour traffic on I-64 at the U.S. Route 150 off-ramp. The scenario involved a semi-trailer truck carrying 20 tons of dynamite that had lost its clutch on the long hill climb northward from the Ohio River. Metro React serving the Louisville, Kentucky/Southern Indiana metropolitan area can be credited with having an exceptional response plan that prevented a bad situation from escalating.

Although this subject matter is exhaustive I hope that my brief presentation has stimulated your interest regarding the importance of having your community become prepared for the worst.

In 1984, the Ohio-Kentucky-Indiana Regional Council of Governments (Cincinnati, Ohio) undertook the task of conducting a Hazardous Materials Transport Study. The planning agency became involved in the study after its executive committee approved a request from the City of Cincinnati to study the problems of routing trucks carrying hazardous materials through the three-state region. The focus of the present study is on the interstate system.

Since the first meeting (October 1984) of OKI's Hazardous Materials Transport Advisory Committee planners have gained significant insights into the numerous restrictions associated with arriving at alternatives and recommendations that can best satisfy all concerned parties.

A word of caution is necessary, as evidenced by Cincinnati's experience to date, when undertaking the task of selecting routes to accommodate trucks carrying hazardous materials: "Federal law preempts state or local hazardous materials transportation requirements that 'unreasonably burden commerce' or are deemed inconsistent with federal policies."¹ This ruling vividly illustrates that there are definite limits

¹ The Wall Street Journal, "U.S. Strikes Down 7 Local and State Laws on Hazardous Material," Tuesday, December 4, 1984.

as to what a state or local government may do with respect to interstate transportation of hazardous materials.

If you go away from this session with nothing else, please be aware that in order to effectively and efficiently tackle this issue TEAM participation is a required ingredient: planners, engineers, law enforcement officials, local government representatives, the truck industry, and the public. Also, whoever is responsible for the final product must *never* recommend definite truck routes. Presenting flexible options after having considered all the variables is a rule-of-thumb that planners must strictly adhere to if a meaningful product is to result from such an exercise. A *workable ordinance* is the measure of success.