Towards Formulating an Ethical Transportation System

Changes in transportation policy, as well as how that policy is perceived, require a transportation system that utilizes intermodalism & new technologies & that offers choice.

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Changes are taking place in transportation policy at all levels of government. These changes challenge current thinking about transportation, providing a way to rise above the thinking that results from the pressures and constraints of day to day work. No matter what the predisposition to transportation policy, it is not difficult to realize the very basic and important fact that our nation's policies toward transportation are in flux. The main uncertainties seem to revolve around the pace of this change and the full dimensions it may take along the way.

Catalysts for Change

Congestion is a catalyst for change. The congestion issue has snowballed in significance during the last five years. Highway congestion was the driving force behind the voter initiatives in California that earmarked billions of dollars for transportation improvements for not only highways, but also for mass transit and railroads. Airport congestion prompted recent action by Congress that encompassed a variety of aviation access, funding and noise control issues. Congestion is the triggering point for leaders of the Northeastern states who are pondering the most efficient way to move travelers between Boston and New York. Congestion affects both our nation's passenger and freight transit systems.

The environment is a catalyst for change. Opinion polls consistently show a strong reservoir of public support for environmental initiatives. Congress has just enacted sweeping revisions to the Clean Air Act. While it is true that California voters — a state that many consider to be at the forefront of environmental activity — have turned down the so-called "Big Green" environmental initiative, the MacDonald's Corporation has announced that it will abandon plastics-based packaging for paper packaging as a pollution-reduction measure. Which is the more potent national trendsetter — California or the folks who operate under the golden arches? The nation's interest in a cleaner environment most definitely affects choices for both passenger and freight transportation pol-

icy, since virtually every transport hub in this country lies in a region of inferior air quality — in what the federal Environmental Protection Agency's (EPA) terms are "non-attainment" areas.

Money, or the lack of it, is a catalyst for change, too. The deferred maintenance on our nation's overworked highway system is at unacceptable levels, forcing highway officials to concentrate on repairing existing roadways rather than undertaking new projects.

One of the main themes that emerged from the U.S. Department of Transportation's National Transportation Policy was the realization that there will not be enough taxpayer or user fee dollars available to fund both the maintenance of existing highways and the creation of new ones. In many cities, the cost of new airports is prohibitive, even if acceptable sites could be found. Greater reliance on private sector financing of transportation improvements is a necessity.

The emergence of a global economy is changing the way transportation issues are viewed. A global economy outlook especially affects how planners approach maintaining and improving the nation's freight system. Since the cost of transportation is an important component of the cost of goods, its cost must not rise too high if our nation is to be competitive in a world marketplace. The emergence of an economically united Europe has forced our government to reexamine the potential of the three national economies of North America. Changes in the marketplace are beginning to suggest the vast potential for trade among the U.S., Canada and Mexico. Indeed, the auto parts industry already illustrates how this intracontinental trade could work. Expanded railroad traffic in manufactured goods, or in paper for recycling, or in Platte Valley corn is moving through the border gateways. These international operations now involve all three nations on this continent.

Another catalyst for change in transportation is what people in the industry call *intermodalism.* Simply put, intermodalism is the efficient tying together of more than one mode of transportation in order to create greater efficiencies in the movement of people or goods. Unit trains carrying double-stack containers that originate from ocean liners in California or Puget Sound to midwestern destinations are but one example. However, the record of applying intermodalism has not been adequate, especially in the movement of people. Dulles Airport, in the remote suburbs of Washington, D.C., has been in operation for twenty years. Only now are transportation planners beginning to wrestle with such problems as how to move people between Dulles and their homes or offices. They are only now beginning to realize that the trip does not end at the baggage claim. An emphasis on intermodalism — freight and passenger — may be the surest way to increase the efficiency of our nation's transportation system and prepare it for the demands of the 21st century.

The final catalyst for change is the growing recognition on the part of transportation professionals, engineers, and government leaders and officials at the local, state and federal levels that our country cannot build its way out of gridlock. The nation cannot afford it and public sentiment clearly indicates that there is little support for such a solution. Increasingly, the public and local governments are saying that the future does not rest in paving over the landscape with new highway lanes or airport runways. Local and state officials are telling the federal government that they want the flexibility to spend transportation dollars in the way that makes most sense in their home areas. That message is being heard loudly and clearly in Washington.

Acting on Change

Change is coming. How do we take advantage of it? First, it is imperative to recognize that all of the aforementioned catalysts, plus others such as safety and the cost of fuel, are tied together. Any solution of one problem area must be viewed in terms of how it will affect solving others. The best solution to any one problem area is that which has the best overall effect. Our nation's railroad system offers a useful option in resolving several of these problems, providing a promising future.

Regarding congestion, railroads have the corridors with excess capacity, both freight and passenger, into the heart of the most congested urban regions. Regarding pollution, railroads

move people and goods with lower levels of emissions per person or per ton of freight than highway vehicles. Regarding money, the nation's freight railroads operate in the private sector, unlike the beleaguered highway system. These railroads annually spend approximately $3 billion in capital improvements — money that does not come from taxpayers. The main line rail system of this country is in the best condition in its history. Since the deregulation of the industry a decade ago, hundreds of new local and regional railroads have emerged to serve rural areas and the important national network of small- and medium-sized cities.

The benefits of railroads underscore the fact that there are answers to the nation's transportation needs. Each mode — aviation, waterways, rail, truck, inland barge or pipeline — has functions it performs best in given settings. The key to the equation is finding the strength of each mode and linking each by that strength.

However, in order for each mode to find its niche and create a strong interconnected system, it is important that government policies do not distort this process of evaluation and connection. One of the objectives of the U.S. Department of Transportation's National Transportation Policy is to promote equity among all of the different modes, to create a "level playing field." For example, the freight railroads will not be able to make use of their excess capacity if government policies either subsidize their competition or impose unique economic burdens on them. Just about every credible study suggests that these inequities still persist.

The Role of Intermodalism

Whether seacoast port improvements or better links between airports, downtowns or other transportation systems are planned, there is an overwhelming need to look at the benefits of tying all of these modes together. In most regions of the country, short-distance commercial airline flights have become expensive, because it is so costly to operate the current generation of trunk airline equipment over these routes. Passenger rail service via Amtrak between New York and Washington now represents the market share leader in that region, overtaking the air shuttle. The New England states are working with the federal Department of Transportation to determine if high-speed surface transportation can move people more conveniently between Boston and New York, thus freeing up additional much-needed airport capacity for the more profitable long-distance flights.

Texas is moving forward with its ambitious high-speed rail project. Other regions of the nation are planning for the high-speed surface transportation requirements of the 21st century — California, Florida, Michigan, Nevada, New Mexico, the Northeastern states, Ohio and Pennsylvania. These states are contemplating utilizing three types of projects that will implement new technologies — magnetic levitation trains, high-speed steel-wheel-on-steel-rail trains, and tilt trains — in addition to expansion of conventional passenger rail service via Amtrak. These three new technologies are important to the development of surface transportation in the United States in the next century.

As each of these advanced technology systems begins to take shape and is used, it will bring benefits to where it is applied. These advantages will take the form of improved service in the city pairs affected, better connections to the national transportation system (aviation, rail and transit) and more choice for the consumer. Choice is important both for price and convenience. Choice stimulates competition. Choice provides an alternative. Even confirmed air shuttle riders between New York and Washington flock to Amtrak on snowy or foggy days.

Summary

The particular analysis of transportation issues presented herein foresees a stronger role for our nation's railroads based on the development of what may be called an "ethical" transportation system. The word, *ethical,* may seem, perhaps, a strange word to apply to something as commonplace, and to something that would appear to be far removed from the moral sphere, as transportation. But it is an apt term, given the new national attention to ethical behavior. However, what would be an "ethical" transportation system? An ethical transportation system does not kill or harm people. It does not waste energy. It does not pollute the air, water or land. An ethical transportation system, by

nature, is a system that is built on sound economics, since if a service flunks the basic tests of economics, it would be difficult to rank it very highly in other terms.

As the leaders and transportation professionals of our nation ponder our transportation options, railroads come out very favorably on the ethical criteria. Their safety record is excellent and improving. Their energy efficiency is better and, therefore, their emissions are significantly lower than other petroleum-based land transportation (highways and aviation). The excess capacity of the existing rail system reduces the need to acquire land for new routes as has been done for the highway system for decades. Railroads — freight and passenger, conventional and high tech — fit into the future of the United States. Study of the current various opportunities and projects mentioned here, as well as many more in this country and in other parts of the world, is essential in developing, implementing and maintaining a workable and ethical transportation policy.

NOTE — *This article is based on a speech delivered to the Boston Society of Civil Engineers Section/ASCE at the F.M. Keville Memorial Dinner on April 24, 1991.*

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