STATE HIGHWAY DEPARTMENT VIEW OF TSM

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Transportation system management is not a new concept but has been practiced as long as there have been transportation facilities. The need now is to have a balanced transportation system in which each mode does the job that it is best suited to do and for which there is an expressed need or desire. In addition, one mode is not artificially enhanced by impeding the efficiency of another mode. Achieving a balanced transportation system requires the cooperative efforts of all agencies involved.

The term, transportation system management, is of relatively recent origin, but surely the activity is very old—as old as transportation itself. Transportation began in this country along the waterways and was centered on the port cities that grew up in proximity to them. In the nineteenth century, railroads emerged as the nation’s dominant transportation mode; in the twentieth century, air travel became a significant mode for moving both people and freight.

In urban areas, commercial and social development helped dictate the location of transportation corridors and was enhanced by the fact that those corridors came into existence and worked well. That sort of symbiotic relation between transportation corridors and the neighborhoods through which they passed has continued to the present time.

The evolutionary development of the various transportation systems has been steady in pace and remarkable in scope as managers and owners proceeded to improve service to users. On rivers, woodburning stern and sidewheelers of sharply limited capacity and speed gave way to diesel tugs, whose tows of essential freight gave way to diesel tugs, whose tows of essential freight were refocusing our attention on the transportation importance of the nation’s inland waterways. Improved trackage and roadbeds, larger and heavier freight cars, and vastly improved diesel locomotives have maintained the preeminence of the railroads in the long-haul moving of heavy and bulky freight.

In cities, small horse-drawn streetcars were replaced by sleek, air-conditioned, electrically powered rail vehicles, many of which make extensive use of computerized controls. Highways have gone from one-lane to two-lane facilities and ultimately to multilane expressways and freeways, whose capacity and safety features would have been undreamed of half a century ago. Access rights to these highways, bought and paid for by highway users, have reduced conflict and increased capacity on them.

This brief outline of the nation’s transportation progress could be extended, but perhaps the point has been sufficiently made: Transportation system management is far, indeed, from being a new concept. We have been engaged in it for a long, long time.

Since World War II, transit systems and railroads have fallen on hard times. Business failures, mergers, and the necessity for increasing governmental involvement have sharply limited the share of the total transportation task of this segment of the transportation industry.

The reverse, of course, is true for highway modes. The U.S. family that does not own an automobile is rare, and the U.S. family that does not own two or more is becoming rare. Americans in overwhelming numbers continue freely and emphatically to express their affection for their private vehicles and for the highway systems on which they depend.

It is in this context, I believe, that we need to interpret all that we have lately heard about the concept of balanced transportation. I am sorry to say that much of what I have heard about balanced transportation has been burdened with the implication that excess capacity is currently available on highways. The simple historic fact is that the highway system has never kept up with the demands imposed on it. And certainly the peak-hour congestion that is a major cause of transportation concern in urban areas is still with us.

But it would be a mistake to suppose that traffic congestion in urban areas is connected in some special way with the emergence of the family automobile as the nation’s basic transportation mode. Such congestion has existed since the days of horse-drawn vehicles. And in major cities throughout this country, traffic flows far more freely now than it did in horse-and-buggy days.

What is a balanced transportation system? A truly balanced transportation system is one that most efficiently allows each transportation mode to do the job for which it is best suited and for which there is an expressed need or desire. We are coming increasingly to realize, I think, that the critical elements of a balanced transportation system are the nexus points at which different modes come together. But surely any thoughtful transportation practitioner must reject that greatly simplistic concept of balanced transportation in which time, effort, and resources are equally allocated to each of the several modes.

The evolution of the several transportation modes has itself brought about many basic changes in the structure of American life. But it has been accompanied by another evolutionary process that has perhaps brought about even more: the process of exchanging rural free delivery (RFD) numbers for addresses in urban and suburban apartment complexes. Steadily through most of this century and at a greatly accelerated pace since World War II, Americans have become and are continuing to become a nation of city dwellers. As a result, transportation needs have increased and will continue to increase in cities.

I do not want to end this on a negative note, yet I have no magical words of wisdom to put it on the upbeat. I will say that I think two things are essential. First, we in government have got to get our act together. We do not accomplish much if what we do with one hand is at cross purposes with what we do with the other. Second, public understanding and acceptance of TSM are crucial. We need to talk less to each other and more to the people. Transportation is a technical matter than ever before and more a political one, in the good sense of that word.

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The Transportation Research Board recognized the phenomenon of American urbanization early. And for many years now it has been actively engaged in promoting research, presenting its results, and otherwise enlightening the transportation industry about the nature and extent of urban transportation problems. The Transportation Research Board has not contented itself with identifying and describing the problems, but has offered specific solutions to many of them.

Most transportation professionals are well acquainted with the specific useful applications of contraflow bus lanes, special lanes for buses and vans, and parking lots at metropolitan fringes as aids to car pooling and van pooling. In Missouri we have had particularly good success with car pooling and van pooling and intend to pursue their potentials as aids to efficient transportation system management.

Means of increasing ridership per vehicle must be exhaustively studied throughout the nation. Admittedly, our efforts in improving traffic flow were vehicle-oriented until rather recently. We have now become aware of and have spent more effort on moving more people in fewer vehicles. In this important continuing task, the resources and accumulated expertise of the Transportation Research Board promise to be of the greatest significance.

I know of no major metropolitan area in the country that plans to continue to build expressways or freeways. Most planned highway improvements within metropolitan areas are either in existing highway corridors or in corridors planned a number of years ago. What we urgently need in our cities at this time is not the construction of more expressway and freeway facilities but an improvement in the capacity and efficiency of those facilities that already exist or are planned.

That improvement in capacity and efficiency is a process, not a single event. And the process is continual. In Missouri, we have been actively and continually engaged in a process of upgrading the expressways and freeways in our metropolitan areas since the 1930s. And our efforts to upgrade freeway and expressway efficiency have not been confined to Missouri. Working with various other groups through the Transportation Research Board, we have participated in research in freeway ramp metering carried on in Detroit and Houston.

The Missouri State Highway Commission and the State Highway Department have the constitutional responsibility and authority for the road-building task and do other state highway agencies. But I know I speak for all my fellow state highway department officials when I say that we want and we intend to work with all appropriate modes and all properly constituted agencies—governmental and extragovernmental—in attacking the staggering transportation problems that confront us. Surely among responsible people there can be no thought of competition among agencies in transportation matters.

The job we face is big enough to demand the best in dedication and skill that all of us working together can bring to it.

Efficient transportation system management will result from the cumulative efforts of all agencies and systems involved. However, efforts should not be duplicated through the establishment of additional layers of review and control. Our efficiency will also be hurt if we lose sight of two other important factors in the problem.

The first is that uniform applications of specific techniques that have worked well in one area not only are not possible but would be destructive of the ends we all seek. St. Louis is not Seattle, the District of Columbia is not Wichita, and Minneapolis is not Memphis. We must resist the notion that a technique that has worked well in one metropolitan area will automatically solve the urban problems of another.

The second is that there are just so much professional capability and so many resources to go around. Adding an administrative layer to the transportation planning organizational structure will by itself do nothing toward solving an area's transportation problems. Indeed, the introduction of such an additional stratum might well hamper and not help the quest for a solution. The imperatives of limited time and limited money will not accommodate to the organizational preconceptions of any of us. In the matter of organizational structure as in all other facets of the overall transportation problems, intelligent cooperation among agencies already in the field based on a prudent awareness of the demonstrated capability of each of those agencies will move us closer to solutions than the creation of new agencies or the reorganization of existing ones ever can.

Artificial enhancement of one mode through impediments to the efficiency of another mode should not be our goal. In Missouri, we have had it proposed to us, for example, that we further restrict lane flow on freeway sections in one of our metropolitan areas already exhibiting minimum service levels. The proposal was that we provide contraflow lanes where traffic patterns clearly did not indicate a necessity for them. The rationale for the proposal was a candidly expressed desire to impede lane flow to such an extent that people using the freeway would be virtually compelled to abandon their private vehicles for buses. Surely such techniques of compulsion have no place in our free society, particularly when those relying on them seek to conceal from the general public their real aims.

Other governmental agencies have other reasons for wanting to impact adversely the efficient functioning of expressway and freeway facilities in metropolitan areas. In a recent meeting on this subject, a representative of the U.S. Environmental Protection Agency told representatives of the Missouri State Highway Department that the federal agency would not approve the synchronization of traffic signals if the net result provided for the movement of more traffic, since such increased movement used more fuel and caused greater air pollution.

Yet a basic principle of traffic capacity is improved efficiency of flow.

Many pressing problems face us as we attempt to manage urban transportation systems intelligently and efficiently. In far too many cases, we are not even attempting to tackle the problems. Let me give a couple of examples of the sort of thing I am talking about. In one major midwestern metropolitan area, buses serve the area's airport but do not provide direct service to any of the metropolitan area's convention facilities. The soon-to-be-implemented rail system serving National Airport in Washington, D.C., is obvious because of its elevated structure. However, a bus system has served that airport for several years, and I challenge you to find information at the airport on the location of those buses, their routing, or their schedules. Wherever and to whatever extent situations of this sort continue to exist, transportation system management can never be anything but a meaningless phrase.

Transportation system management must be more than that. It must be a dynamic element in transportation situations throughout this country. The state highway departments have the knowledge, the experience, and the dedicated interest in using transportation system management to create a totally efficient transportation system in all our cities. We welcome opportunities to share our concerns and ideas with other transportation people as we all work together for that desired goal.