DEPARTMENT OF TRANSPORTATION | NEWS

FEDERAL HIGHWAY ADMINISTRATION

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SOLVING THE RUSH-HOUR TRAFFIC PROBLEM

ADDRESS BY FEDERAL HIGHWAY ADMINISTRATOR F. C. TURNER AT ANNUAL MEETING, MISSISSIPPI VALLEY CONFERENCE OF STATE HIGHWAY OFFICIALS, CHICAGO, ILLINOIS, MARCH 15, 1972.

Ralph Waldo Emerson said, "The reward of a thing well done, is to have done it." That certainly applies to you as highway officials, because in helping build the Interstate System - the safest and best engineered road network in history - you have done your job, and you have done it well, indeed!

In fact, you and other highway officials have done such a good job that we Americans have come to take our extensive highway system for granted. For example, during President Nixon's recent visit to China, I noted a very interesting fact: while China has more people and more land area than the United States, it has only about one-tenth as much highway mileage -- and most of that is not hard surfaced.

Our Federal-State highway program has come far and fast since it was launched in 1916, and it has been accompanied by a myriad of economic, social and safety benefits. In addition to constructing the roads, we are beautifying them, we are removing unsightly billboards

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from the roadside, we are protecting the environment and the ecology, we are providing generous and humane treatment of those who must move because of highway construction, and we are encouraging the multiple use and joint development concepts for the highway rights-of-way.

But of course with all the progress we have made, we still have some inevitable problems.

And one that seems to have attracted most of the public's interest is that of rush-hour congestion in our large urban areas.

I would stress the words "rush-hour" and "large urban areas," because that is what this problem is really all about. The highway systems in even our largest cities perform very adequately except for a couple of hours in the morning and a couple of hours in the late afternoon when commuters are heading to or from their jobs. We go further faster than we did 10-20-30 years ago -- and average speeds are in the 30-40 m.p.h. range. And smaller cities really do not have any sigrificant problem of congestion.

So what we really are talking about are relatively brief periods in the morning and afternoon on highways that radiate from the central business district to the suburbs.

Actually, most of the travel in a metropolitan area does <u>not</u> go to the central business district. For our six large cities of from one to five million population, only 10 percent of all trips are to the downtown area; the remainder are all over the metropolitan area, in an infinite variety of patterns.

However, the rush-hour congestion problem in our large cities is very real, and it must be resolved. Fortunately, a variety of solutions are available.

The basic problem, of course, is that too many low occupancy cars are competing for space in the same travel corridors during the peak periods, and we are fast approaching the saturation point. We must reduce the per capita area utilization of our street network, just as multi-story use of land has done for living purposes. The average automobile occupancy rate during rush hours is 1.5; if that rate could be doubled it would mean that half the cars would disappear from traffic during rush hours, and then there would be no problem.

But, human nature being what it is, we know that this will not just happen; it has to be "encouraged."

Let us take a quick look at some of the things that can be done to solve the rush-hour problem.

Staggered Work Hours. This is a very helpful method of avoiding traffic tie-ups, and I can give personal testimony as to its effectiveness. When I first moved to Washington, D.C., some 30 years ago, all the government offices let out at the same time. I lived then some 3½ miles from downtown Washington in the northern Virginia suburbs, and it took an hour for me to get to the office by bus. Today, I live about seven miles from downtown, but I can make it by bus in about 35 minutes. So three decades later, I can commute twice as far in half the time, as can four times as many new commuters as 30 years ago, and it is to some considerable extent because of the staggered work hours that are now in effect in Washington. (This also graphically refutes much of the hyperbole we hear about traffic slowing to a standstill in our cities.) A good

example of staggered work hours can be found right in the Department of Transportation's headquarters building in Washington, where the Federal Highway Administration is quartered. The Coast Guard begins work at 7:30, FHWA starts at 7:45, and other administrations report at intervals until the Office of the Secretary starts at 9 o'clock. In the afternoon, the Coast Guard lets out at 4 o'clock, FHWA at 4:15, and the others continue to dismiss at intervals until the Office of the Secretary closes at 5:30. This same type of system is needed in the central business districts of all large cities, and on the part of private industry. Studies have shown that uniform work time staggering over two hours can reduce peak central business district travel by about 35 percent.

Staggered Work Days. It may become desirable or necessary to change the traditional work week, so that some employees work Monday through Friday, and others work Tuesday through Saturday. The four-day work week is another possibility that is being considered, and if it proves feasible, it too, could be staggered. It is estimated that a four-day week, staggered over five days, can reduce peak central business district travel by 17 percent, with a still further reduction if spread over six days instead of five.

Car Pools. This is an excellent tool in reducing rush-hour congestion, and there are several methods of encouraging the formation of car pools. One way is to provide car pool locator systems in office buildings and other downtown locations to enable people who live and work in the same areas to get together and form car pools. Another way is to restrict parking facilities to car pools -- such as is done in our office building, and most other government office buildings, in Washington.

For example, at another Federal building in downtown Washington, the occupancy rate of the cars using garage space is 3.6. If this condition were universal, there would be no problem of congestion because of the 50 percent reduction in the number of autos in use. Still another way of encouraging car pools is perhaps to permit them to have access, on a controlled basis, to exclusive bus lanes on freeways, so that they can cut travel time, and thus have further incentive to car-pool.

Mass Transit. As highway officials, one of the best -- and most effective -- things we can do to reduce rush-hour congestion is to support mass transit. Obviously, one bus carrying 60 persons occupies much less highway space than 40 cars carrying the same number of people. As a result of the 1970 Federal-Aid Highway Act, we have existing legislation that permits us to help transit by building exclusive bus lanes or even bus highways or "busways," along with giving transit other kinds of preferential treatment. And our sister agency, the Urban Mass Transportation Administration, can provide the grants to purchase new fleets of buses where needed.

Bus mass transit is a legitimate concern of the highway program, because the buses run on highways. And by inducing people to leave their cars at home during the rush hours, transit buses can make an enormous contribution to relieving traffic congestion. So it is fitting and proper that the 1970 Act permitted the use of Highway Trust Fund monies for these highway mass transit purposes, and we must give this part of our program increasing support.

In considering mass transit systems for our urban areas, we must start with the 3-C total transportation planning process. This planning, which is initiated at the local level by local officials, has become a model of efficiency and dependability, and it should be the basis for whatever decisions are ultimately made regarding mass transit systems. With this 3-C approach, you can be sure that the final decisions will be soundly conceived. And that is vitally important, because the monies involved in creating new mass transit systems are going to be substantial, and we cannot afford mistakes.

We have learned that bus mass transit can be both truly rapid and successful. For example, patronage on the express buses using the exclusive bus lane on Shirley Highway in Washington, D.C.'s suburban northern Virginia area has increased 230 percent since the program began two-and-a-half years ago. In actual numbers, that means the customers using the express service on the exclusive bus lane have jumped from 1,900 to 6,200! As a matter of fact, the patronage of this express bus service has been increasing so rapidly that just last month UMTA put 20 more new buses in service to help relieve overcrowding on the existing fleet of buses.

Now the 6,200 commuters that I mentioned are now using the rapid transit bus service are those on buses which travel most or all of the 11 miles of the exclusive bus lane. However, more than 12,500 passengers are now riding buses which utilize some portion of the exclusive bus lane. That means there would be an additional 8,000-plus

automobiles on the highway during the rush hours if it were not for the buses. So I think it is obvious why I say that as highway officials we must support such mass transit projects.

Another very significant fact about our Shirley Highway bus program is that during the morning rush hours, more people are now riding in the buses than in private cars, and as a result the traffic flow is showing considerable improvement.

Now what is being done to provide bus rapid transit on Shirley Highway in northern Virginia can be duplicated in practically any large urban area in the country. And these programs can be implemented now -- there is no need for a multi-year construction program, and as a result relief for traffic congestion is available immediately, not some time in the future. In addition, and importantly, these bus mass transit systems can be developed at relatively moderate cost.

Another method is to provide buses with exclusive lanes, or other significant preferential treatment, on existing city streets. At the Federal Highway Administration we are presently looking into several possibilities in this direction.

In describing the ways mass transit can help relieve the urban rush-hour traffic problem, I have of necessity been referring to radial-type transit lines -- because that is the type that will be needed to get commuters from the suburbs into the central business district to their job locations.

However, the very characteristics that will enable mass transit to be successful in this area will severely limit its usefulness in

another area. I refer to the needs of the aged, the poor, the infirm, and the young. Transit systems are often espoused as the means of providing for their needs -- but studies of the actual transportation requirements of such persons indicate that, in fact, transit as we presently think of it, generally is poorly suited to their needs.

Their are many reasons for this. First, there is the problem of gaining access to the transit system: somehow people must get to it, and usually the access point is not located nearby. Then even when they get there, waiting at transit stops, boarding difficulties, transferring, and often having to stand in a transit vehicle are real problems for the elderly and the handicapped. Then, too, as I have pointed out, transit must necessarily be oriented principally to serve the central business district work trips, and service must be concentrated in peak periods. The transportation disadvantaged very often cannot work and do not make work trips. Those who do work find fewer opportunities in the central business district because office employment increasingly predominates in such areas.

The real needs of this group are to shop where prices are competitive, to get to health, welfare and educational services, to visit friends and relatives, and to go to work places that frequently are outside the central business district. The diversity of those needs are similar to those of everyone else and these are not well served by the typical public transportation facility operating on fixed schedules oriented to serving the central business district. Lacking an automobile or the ability to drive one, a taxi or jitney-type service could best suit

their needs. Public policies to promote such service and to provide for their payment would seem to be in the public interest as a part of the public transportation network of a city.

While we will welcome -- and encourage -- mass transit as a helpful tool in reducing rush-hour congestion in our urban areas, the highway system must also be retained, expanded and upgraded as the principal mode of travel in all of our metropolitan areas -- both large and small.

Only highway travel in private cars can provide the flexibility to accommodate the almost infinite number of travel patterns that are required in our metropolitan areas today. Realistically speaking, no transit system -- bus or rail -- could possibly begin to supply the multitude of complex routings that are required to meet these needs -- only the private automobile can do that.

We must also anticipate that even those people who will use mass transit for their work trips -- and hopefully their numbers will be large -- will most likely revert to their own automobiles when they get home from work in the evenings and on the weekends. People simply desire and prefer this personal mobility and flexibility, which enables them to come and go when and where they wish.

So while we need to augment our mass transit facilities in urban areas, we also have a real and critical need to improve and upgrade our urban highway systems. We know, of course, that our highway needs are divided almost evenly between urban and rural areas, and our new Urban System, provided for in the 1970 Act, now enables us to treat them equally. That is because streets placed on the Urban System will

be those that are not presently on the Federal-aid systems, and this, in turn, will greatly increase the amount of Federal-aid highway funds available to the cities.

As you know, we have long referred to our primary and secondary roads and their urban extensions as the "ABC System." The new Urban System, in effect, now expands this description to the "ABCD System."

At the same time that we must dramatically improve our urban highways, we must do the same for our rural primary routes. They have, of necessity, been somewhat neglected since the Interstate System program was launched 16 years ago, and the needs are very great, indeed. Althoug these are the Nation's most important highways, next to the Interstate routes, many of them are 30 and 40 years old, and badly outdated. They simply are inadequate for the traffic of today -- not to mention the traffic of tomorrow. And -- most importantly -- in addition to the congestion factor, they represent a very serious safety problem.

We must be ready to move now with a new urban and rural highway program -- one that is a good program.

In conclusion, let me again stress the need to support mass transit systems for our cities. But, by all means, let no one delude himself that we can afford to neglect or abandon our highway systems.

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