

Nine prevalent myths about

BY FRANCIS C. TURNER
Administrator
Federal Highway
Administration



A lot of current day mythology has arisen regarding the nation's highway program . . . myths that have no relationship to reality. Nevertheless, they are being talked about and written about and they have attracted the attention of some of the people who would rather believe in fancy than facts. Adapted from Mr. Turner's remarks at the 55th annual meeting of AASHO.

• **Myth No. 1:** Highway officials, susceptible to blandishments of some unseen and selfish "lobby," are striving to pave over the whole country, particularly our cities, just to permit the "lobby" to sell materials, or equipment or provide itself with perpetuity.

First, let me acknowledge that there indeed is a "highway lobby," in this country. It consists of the men who own our 165 million motor vehicles. This "lobby" includes not only the owners but also has an auxiliary membership which includes the vast rest of our 200 plus million people who may not own a car but are basically dependent on the automobile for virtually every aspect of their lives.

Second, the "paving over" allegation is exaggerated. In 1916, when the federal-state partnership for improving the nation's roads came into existence, there were only 3 million mi. of roads and streets. In that year, we had only 102 million people and 3.6 million motor vehicles. Today, 53 years later the mileage of roads and streets has increased by less than 1/4 to a total of 3.7 million miles. The population has doubled but vehicles have increased tenfold.

The truth is that most of the investment made during the last half-century or so has been made not so much for new routes but for improving the existing system. The joint federal-state effort has been directed largely toward improving — in terms of capacity and safety — the basic network we have had since the horse-and-buggy days. The improvements which have been made have been in response to the swelling number of vehicles and the increase in their individual demands for better accommodations. This is the true "highway program" and I personally believe it is a true and excellent example of how a democracy such as ours was intended by our founding forefathers to work.

Myth No. 2: Because of congestion, modern highways, particularly our urban freeways, are moving traffic slower today than during pre-freeway days.

Prior to the construction of freeways in Los Angeles, it took 30 min. to cover 10 mi. on conventional streets. After freeways were built, in the same length of time it has become possible to cover 25 mi. on the Harbor Freeway, 20 mi. on the San Bernadino Freeway, 15 mi. on the Hollywood and Ventura Freeway, and 10 mi. on the Harbor Freeway, an increase in travel speed of 10 to 15 times the possible pre-freeway speed. So far from being the largest parking lots in the world and being a rather cruise humor, and far from the truth, the Los Angeles Freeway system, I would estimate, has an average speed for this long a distance of 100 to 120 miles per hour.

The truth is that urban freeways move traffic at much higher speeds than city streets. At a speed of 35-40 mi. an hour, the freeway carries 10 to 15 times as much traffic as a city street.

nation's highway program

the number of vehicles per lane as does the average street. It would require 20 new lanes of surface street to carry as much traffic as an 8-lane freeway. But the 20 lanes would have neither the speed nor the safety of the freeway.

Benefits of the freeway are many, but probably the most important is its safety superiority over conventional city streets. Head-on collisions, opposite direction side-swipe, vehicle-pedestrian accidents, and traffic turbulence at intersections and driveways have been eliminated. Freeways are twice as safe as other city streets in terms of fatalities, and about four times safer as far as personal injuries are concerned.

Myth No. 3: Travel today in urban areas is slower than in the horse-and-buggy days.

It is always good for a chuckle or a "horse laugh" when someone says we are without factual substance. Admittedly, traffic in the highly publicized downtown areas during peak hours moves frustratingly slow, but believe me, it moves faster as a general rule than in the pre-motor vehicle era. If we were still trying to use the horse and wagon, we would have much worse congestion than we have today and also some other problems more difficult and unmanageable than our present ones.

Myth No. 4: Highway program takes valuable agricultural land for right-of-way and we are about to produce a famine for the nation.

Actually, by replacing the horse and mule, motor vehicles have made more land available on which to grow food for humans. In 1910, 90 million acres were required to feed for horses and mules. This is twice the area of all the right-of-way on all of the entire public street system of our nation today. And the pavement itself is only a minor fraction of this amount. Interestingly, we also are taking more agricultural land out of crop production as a part of our soil bank program each year than we take out for new highways — because of overproduction of agricultural products.

Myth No. 5: Urban highway construction and improvement take land from the ratable rolls, reduce tax revenues, and thus compel the remaining taxpayers to make good for the loss by having to shoulder an added tax burden.

There are hundreds of studies which show that there may be a brief loss in ratables in some instances, but in the overwhelming majority of cases, the highway program brings with them substantial economic benefits. I will give a few examples.

The best documented cases is Route 128, a circled highway around Boston. It was opened in 1957. It is estimated that by 1959, over \$137 million was invested in new plants along the route employing 19,000 workers. Although some of this activity was migration from other parts of the community, it added to the whole metropolitan area represented an additional \$129 million, and added 19,000 new employees to the area's payrolls.

The second illustration involves a smaller town — Yankton, S.D., a city of 9000 population where 3.1 mi. of U.S. 81, running through the heart of the city, were widened and upgraded in design at a cost of \$852,488. An in-depth study made by the Federal Highway Administration of the impact of the improvement disclosed that it saved time and money for the citizenry, reduced accidents, spurred business, boosted employment, hiked land values, and improved the tax base.

The study further revealed that accidents dropped from 71 in 1956 to 34 in 1965, even though travel doubled from 1½ to 3 million vehicle mi. The overall cost to the user, which in addition to accidents includes travel time and vehicle operating costs, totaled 15.8 cents per vehicle mi. before and 13.1 cents after the highway was rebuilt, a decrease of more than 15%. The number of businesses showed a net increase of almost 100% — from 60 to 119.

Land values showed a sharp increase as assessed valuations for property tax purposes climbed from \$1.2 million to \$2.79 million, an increase of 133%. It is estimated that the improvements themselves increased assessed values by more than 100%.

The number of persons employed by business firms along U.S. 81 jumped from 402 in 1956 to 952 in 1965, an increase of 137%. By comparing this with the increase in a "control group," it was concluded that at least 1/3 of the increase was due solely to the widening and upgrading of U.S. 81.

Myth No. 6: Freeways use up tremendous amounts of scarce urban land needed for other purposes.

The fact is that urban freeways presently planned will require less than 3% of the land in the cities and if we didn't build the freeway types of highway, several times as much land area would be required for moving the same traffic volume by conventional street systems. In Los Angeles — sometimes held up as a horrible example — the proposed 800 mi. of freeways (only a fraction Interstate system incidentally) that will run through the metropolitan area by 1980 will occupy only about 2% of the available land.

It has been frequently charged that half of the total area of Los Angeles is devoted to highways, streets and parking — in other words to the motor vehicle. This is true at this present time only about the central business district. But a large share of the parking usage represents land that is in a transitional stage from old, uneconomic buildings to new high density buildings use which will then permit parking as an incidental to some other usage of the same plot of ground. And this other type of land usage could not occur if the street and vehicle did not provide the access thereto. About 50 years ago in the horse and buggy and trolley era, 50% of the central business district was devoted to streets, alleys and sidewalks. We do not have a record of the amount of area that was devoted to the stables and wagon yards to park the horse and buggy transportation of that era, but it must have also been a sizeable amount. Surely some small additional

percentage is not too high a price to pay for the speed, convenience and flexibility of the private motor vehicle, and accessibility which it brings that makes all the rest of the occupied land as valuable as it is.

It is interesting to note that when Pierre L'Enfant laid out the city of Washington, D.C. in 1790, a full century before the days of the automobile, he proposed that 59% of the total area be used for roads and streets. This is even more than the area now devoted to highway transportation and parking.

Myth No. 7: We have reached the stage of a national coast-to-coast and bumper-to-bumper traffic jam, with the whole country stragling in traffic congestion.

This is really an interesting one because last year Americans drove a whopping one trillion 16 billion vehicle mi. If, as some critics claim, motor vehicles have become immobilized on our highways, how did the driving public rack up this fantastic mileage? There just had to be more than a few gaps in the mythical coast-to-coast traffic jam.

Myth No. 8: Highway people want to prevent any other mode of transportation from being made available because they are so selfishly jealous of the automobile that they don't want any competition.

The real truth is that no group is more aware of the limitations in highway transportation than are the highway people themselves and no group is more willing than the hard-pressed highway administration to share with others some of the heavy burden of transportation in this country.

We in the Federal Highway Administration welcome with open arms the contribution which any mode of transportation can make toward moving people and goods efficiently. That is why we support enactment of the pending Public Transportation Assistance Bill of 1969 which would provide \$10 billion over the next 12 years to cities for additional mass transit facilities. Please note that this bill would permit both or either rail and bus types of mass public transit.

There is no disputing that in some areas of high population density, rail mass transit can do a fine job, and we enthusiastically support its construction in such cases. But we also recognize a truism of transportation life — that in many areas rail transit is impractical and uneconomical and will never be built. Those areas then must rely on bus mass transit, which today is already carrying 70% of all transit passengers in our urban areas, and the bus will probably continue to be the only form of mass transit in at least 95% of our urban areas of 50,000 or more population, and in every one of our smaller communities.

We must not lose sight of the fact that about 70% of today's population lives in urban areas, and by 1985 this figure will jump to almost 80%. As this growing urbanization continues, more and more people will have to depend on bus public transit.

Myth No. 9: Rail mass transit can substitute effectively for highway transportation in an either/or, or local choice basis.

In some larger cities, it can surely augment highway transportation of people but what about the movement of goods none of which can be moved by a rail line? To talk about rail transit as the single, simple panacea for all the nation's transportation problems in every urban area simply does not jibe with reality.

The clothes we wear, the food we eat, the newspapers we read, the mail we receive, are all dependent on highway transportation and even more so within the urban areas than the inter-city links. As a matter of fact, it is difficult to imagine any major facet of American life that is not closely linked to rubber-tired transportation.

In the 233 urban areas of more than 50,000 population in our nation today, 99% of all person-trips and 98% of all person-miles of travel are by highway vehicle. Of 213.6 billion person-trips annually, 205.4 billion are by automobile, 6 billion by bus, and 2.2 billion by rail. Of 653.3

billion person-miles annually, 616.2 billion are by automobile, 23.9 billion by bus, and 13.2 billion by rail. In smaller urban areas, the proportion of highway travel is even higher.

In intercity travel, it is estimated that 931 billion person-miles, 931 billion are by automobile, 23.9 billion by bus, for a total of 956 billion or 88% of the total by highway. Air travel was second with 67 billion person-miles or less than 9% of the total. Thus highway mode is more than 10 times as big as all other modes together.

Mass public transit, whether by bus or rail, must play an increasing role in urban transportation. There is nothing in the foreseeable future that will substitute or greatly reduce the need for some mass transit and other traffic arteries in our growing cities. These must be provided, with much greater emphasis placed in increased use of buses moving on the transit system to accommodate the increasing number of people traveling into and out of the downtown business areas in rush hours — or alternatively we must revise our present concepts of the working hour to spread peak demand over considerable periods of time — both day and night and perhaps on weekends as well.

The limited experience we have had with pilot projects and exclusive bus lanes on freeways indicates that buses can play a major role in the movement of people in urban areas. Buses traveling on freeways between the city and the suburbs could afford a substitute for many of the private cars now contributing to street congestion. A switch of 50 persons from their own cars to buses could bring a reduction of 30 cars on city streets.

We are closely observing an experiment recently completed on Interstate 95 in northern Virginia where lanes have been reserved for exclusive bus traffic from Washington, D.C. in the morning rush hours. It is already that travel time is reduced by restricting the use of the lanes to buses, and we are hopeful that many more people will leave their cars at home and use bus mass transit.

Yes, there are many myths and much misinformation being spread about the highway program. We must never act in a responsible way that separates myth from hard facts. In dealing with the real world of transportation, we must base our actions on sound basic information, constantly apply the trained professional expertise and experience which we have learned. We cannot be swayed by simple hunches and emotions. We must evaluate the whole of our country's transportation needs in relation of those needs to the overall needs of the nation.

The right answer may frequently involve a mixture of more than one form of transportation. In every case, the selection of the individual mode or the amounts of different modes to produce a proper mix must be based on factual information of what combination will produce the most overall efficient service to meet the needs of the particular situation. These decisions cannot be achieved by a popular referendum based on public group action or hunches. Each element of the system selected must complement the others to produce the most effective transportation system. As engineers and planners, we are trained to make decisions in this way. The cooperative, continuing comprehensive transportation planning process in which we engage in every urban area of more than 50,000 population not only forms the solid base on which to develop a sound highway program for these areas, but at the same time it creates the data base on which the most appropriate mode of mass transit is selected. Please note that I called these transportation planning processes — and that I did not limit them to a single highway mode. This is significant because it accurately descriptive of the procedure which we use in the highway program to insure that we do make transportation decisions on the basis of a full consideration of the whole of the transportation needs and possibilities of the community — in every one, not just some — of our present urban areas of more than 50,000 population.