

Highways And The City

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A few days ago I was talking with one of the men in our office about the problems of a magazine editor who had been asked to address a group of road builders. He said not to worry about it—just start off by saying something nasty about the people that give the highway builders the most trouble. This, he said, was a sure-fire way to gain the interest and respect of any audience. If you're talking to building contractors, say something nasty about architects. If you're talking to architects, say something derogatory about their clients. I suppose that, if the tables are turned and you have to face a group of publishers or editors, you would do well to start out with some snide remarks about printers.

Anyway, this advice seemed very sound, so I quit worrying about the speech—until last week. Then I began to think: these highway experts probably hate magazine editors as much as anyone else—most particularly those editors of architectural and building magazines who are presumptuous enough to lecture on road building to road builders. You think I'm fooling—but just wait. If you don't dislike magazine editors now, remember that the speech has just begun.

To dispel immediately any friendliness that may be lurking in some dark corner of this room, let me tell you of the thought that kept my mind off the bumpy road I traveled this morning between Indianapolis and Lafayette: I kept wondering if this conference on road building in 1957 didn't make about as much sense as the last annual convention of carriage makers back in 1909. Why? Did you know that General Motors has announced the formation of a new division, prophetically named "the electronic highway department!" And, did you know that the Rotor-Craft Corporation of Glendale, California, has announced the production of a jet-powered helicopter for civilians—as simple to operate as an outboard and priced at half the cost of our cheapest automobile—less than \$1,000! Who needs roads?

Shall we adjourn the meeting and go fishing?

Maybe I will have trouble convincing you that the outlook for highway building is a gloomy one, for I know and you know that \$100 billion of federal, state and local funds will go into highway building in the next 10 to 15 years. But in one major respect the outlook for highway building is indeed gloomy: unless we are careful, the program will completely fail its purpose.

Most people would say that the purpose of a highway is to move traffic. Not so. That is its function. Its purpose, like that of any public facility is *to serve the community*. Unless the new highways serve the community, regardless of how well built they are, how smooth, how fast, how heavy an axle load they will carry or how attractive they are, regardless of how well they meet all these tests, if our new highways do not serve the community, they fail.

Service to Community

Let us define this phrase "serve the community."

First, what do we mean by "the Community"? Broadly speaking, we mean the metropolitan areas of America—the bigger cities plus their residential suburbs, their industrial districts, their shopping strips, their ever-widening fringe. These metropolitan areas now contain 60 per cent of our 160 million population, and they will take a much bigger proportion of the 50 million increase in population during the next 15 to 20 years. They now garage most of our 50 million automobiles, and they will take almost all of the 100 per cent increase in automobiles expected during the same period. They generate 80 to 90 per cent of all traffic on our major highways, in that they account for the origin and destination of this much highway traffic.

Our metropolitan areas are growing in acreage as well as in population, consuming rural land at a gluttonous rate.

In the January issue of *Forum*, in an article on the land boom, we described the land-hunger of our cities: "The over-all proportions are Paul Bunyan's. Between 1947 and 1956, something like 5.7 million acres were bulldozed out of U. S. farmland and brought, in the main, into urban area. Postwar housing alone has consumed more than 250,000 open acres annually, based on one-quarter-acre per unit, including streets, for the more than 1 million new houses a year averaged since 1947. The size of the bite taken by commercial and industrial building can't even be guessed at. But a clue to its magnitude shows in the fact that at least 225 organized industrial districts (average size: 500 acres) have opened since the war, while some 2,000 new shopping centers, scaling in size from vast regional

mart to neighborhood nests of three or four stores, have probably carved away another 10,000 acres."

These land-eating metropolitan areas of our country comprise the community of which we speak, the community which the new highways must serve.

Now let us consider in what ways the highway has served this community in the past and how it must serve the community in the future.

The auto and the highway have helped build our cities. The canal and the railroad put the cities where they are; then the auto made them grow. In some respects the highway is just as important a factor in city survival as the railroad; there are, for example, almost as many highway trailers and semi-trailers in the U. S. as there are railroad box cars, and they carry more freight per year than the box cars do!

But the auto can break cities as well as make them. The auto's speed and turning radius long ago made the city's horse and buggy street pattern quite obsolete; the auto's quantity production long ago made the city impossibly congested; and then the auto provided the means by which the city's upper and middle income groups could escape from the city . . . and the means by which the city's slums and blight are now being transplanted into the suburbs and into the country.

Out of control, as it is today, this city-smashing chain reaction will end only when we run out of unspoiled land as one metropolis sprawls into another.

This is already happening. Even in spacious Texas, you can travel 30 miles from Dallas to Fort Worth and never escape the tight, ugly pattern of urbanism. You can travel all the way from Norfolk, Virginia, 700 miles to Portland, Maine, along a continuous corridor of commerce, industry and split-level houses. The growth of these between-city areas has been rapid; during the next two decades it will be explosive. Listen to what one of our leading authorities on urban geography, Catherine Bauer, says on this subject in a recent issue of *Forum*: "Between 1955 and 1975, the population of the U. S. will probably shoot up by 56 million people, or 35 per cent. The overwhelming majority of the newcomers—at least 46 million of them and probably more—will veer from the central city to the fringe. The result: suburban population, on the average, will double; in areas where the growth trend is particularly strong, it will quadruple or more. The rural fringe, that giant sponge which has ab-

sorbed more than half the suburban development of the past five years, will attain a degree of scatteration unknown today . . .”

She goes on to say that “the challenge of tomorrow—the shaping of the metropolitan community that must provide for these 46 million more Americans outside our central cities—is going unheeded, by and large. Most new development continues to take place outside the jurisdiction of responsible local government or of well-staffed planning agencies. Growth in the hinterland just happens—shaped, in the main, by fate, the ad hoc decisions of individual developers, and the narrow financial concerns of the Federal Housing Administration and the lending agencies.”

Highway Improvement Impact on Cities

Fortunately, the auto and the highway which have contributed to the growth and congestion crisis now confronting our cities can also be their salvation. But will they? Will the new 41,000 mile highway program, about 6,000 miles of which will be built within urban areas, relieve the traffic congestion which is choking our cities? Not unless it helps solve the fundamental problems that cause this urban congestion.

To illustrate what we mean by this, let us consider for a moment the impact on a typical community of a radial access highway of modest proportions. First, we'll look at the downtown end of this road; then at its affect on the fringe.

Let us suppose our community is struggling with plans for the redevelopment of a large slum area near the city core. It is also building a civic center four blocks south and a large public garage nearby. Across the street the city's leading industrialist has been convinced he should erect the first office building to go up since the war. A street widening program is also underway. For the first time in years the city is buzzing with optimism. Then comes the announcement of your plans for the radial access highway. It can help along some or all of these separate plans for the radial access highway. It can help along some or all of these separate plans for the renewal of the downtown area—or it can take them by surprise and offer little or no help. The highway could aid the slum elimination project by bulldozing out some of the blighted buildings, or it could make the relocation of slum families almost impossible by leveling blocks of livable housing less than a mile away. It could help the civic center by making it more accessible to more people, or it could jeopardize its success by leading the population elsewhere. Similarly, it could respect the private builder's investment or forever

discourage such new downtown construction. It could tie into the garage and street widening plans or ignore them, and thereby make or break the local traffic jam.

You say there is no question about this cooperation between the highway planners and the community leaders. I say there is. And I cite the unhappiness of every community along the projected relocation of Route 22 in New Jersey—one of the busiest highways in the state—plans for which were sprung with complete surprise a couple of weeks ago by state and federal highwaymen.

Of course it would be ideal if every community not only had a master plan of future development but also had it published for all to know. Better yet, the downtown renewal program and the access highway program should be planned simultaneously, as it has been in several of our more wide-awake communities.

Now let us look at the other end of our new radial access highway to see its effect on the metropolitan fringe. Assume that the metropolitan area has a radius of 15 miles—a commuting time of 45 minutes over ordinary major streets to the fringe. And, assume that the proposed radial freeway is to be a 50 mph road with an interchange 20 miles from the center of town. Allowing the commuter 10 minutes to get on the highway and 10 minutes to get home from the interchange, this new highway will permit him, within the same 45 minutes, to reach any point within four miles of the interchange. You have thus opened up a 50 square mile area to residential development. At $1\frac{1}{2}$ persons per acre, that means 50,000 people or about 15,000 families and 15,000 more automobiles. Did you highway engineers figure on this added load when you designed the highway? Did you provide for the distribution of this traffic into the various parts of the city? Did the city provide parking space for these extra cars? Was the city otherwise prepared to handle this new traffic increment? Were plans made for the orderly growth of the new suburban community or will it become another roadtown or a rural slum? Would it have been better to place the interchange five miles farther from the center of the city so as to have created a separating green area, development of which would be discouraged by its relative inaccessibility?

Would it have been better to shift the radial expressway as little as 20 degrees, which would have put the new suburb of 50,000 people in an entirely different area—eight miles away from where it was before? Which site, according to the city planners, is the better spot for a new suburb?

These and similar questions indicate that the transportation problem is not simply a matter of providing more and bigger highways and parking lots. As Wilfred Owen says, the metropolitan transportation problem is really only partly a transportation problem. "Half is building additional transport facilities. The other half," he says, "is creating an environment, one in which the transportation system can work." By "creating an environment," he means imposing restraints on the types and intensities of land use to avoid the creation of transport demands beyond the capacity of the transportation system. In other words, to make sure that the problem a highway is designed to solve doesn't change as soon as the concrete has set.

Highway Planning

I can hear you say that often the city has no plans for the highway designers to tie into. All too often this is true. But most large cities and many smaller communities do have plans and planners. For you to ignore or disregard them is inexcusable. If they do not exist, then it behooves the highway builders to urge the cities to find out—or to find out for themselves how a proposed highway can best serve the true interests of the community.

Highway planning today involves so much more than technology and design that few engineers are qualified to handle the job alone. Their work today involves land use planning, industrial development, land economics, urban renewal, city planning and a host of other specialties. If they are intelligent enough to see this, they are also intelligent enough to see that they cannot do the full job alone. They must work closely with the city planners and, where cities do not employ planners, perhaps they themselves should hire planners as consultants. Surely we want our highways in a hurry and at a minimum cost consistent with sound design. But speed of construction and low cost may be far less important than the long-range benefits and economics that may be had by devoting a little extra time and money on integrating the highways into other city plans.

Without such thoughtful coordination of the highway program with city planning and urban renewal, the proposed \$100 billion of highway spending will buy as much chaos as concrete, and 15 years from now we will be little better off than we are today.

We who are concerned with the welfare of our cities (and that should include all of us, for we have an investment of some \$500 billion in our cities—roughly \$3,000 for every man, woman and child

in the nation)—we who are concerned with the welfare of these cities and the protection of this colossal investment are counting on you in the highway industry to use your new-found influence with discretion and to be forever mindful of the best interests of the community. In your hands is the fate of our cities—the rebuilding of our old ones and the formation of our new ones—the continuous roadtowns that will follow close behind your concrete machines and the new cities that will mushroom at the interchanges along your express highways.

Smarter men than I have prophesied that during the next few years you and your colleagues, in planning the highways under the new Federal Aid program, will have more effect on the pattern of growth and the character of our metropolitan areas, than all of the planning done by all of our city planners since the war.

That, gentlemen, is an awful responsibility. I beseech you to handle it carefully!