

URBAN TRANSPORTATION PLANNING

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Much is being said and written these days about our urban areas with particular emphasis being placed on transportation problems—or, if we accept the

terminology of most of the journalists, the “transportation crises” or the “transportation mess.” While some of us may believe that many of the statements being made are exaggerations, and we can point to some instances where travel times in urban areas, even during the peak hours, are less now than they were 10 or 20 years ago. I believe we all acknowledge that we have a problem.



I'm certain all of you are familiar with the statistics on the population growth of our urban areas. These figures in themselves indicate the need for expanded highway facilities, but the nature of the development has also been an important factor. Travel patterns have changed significantly since the end of World War II. There has been a relative decrease, and sometimes an absolute decrease in the numbers of trips to the central business district, while the numbers of crosstown trips have risen rapidly. These changes have, in turn, greatly affected the mode of travel.

The shift from mass transit to private vehicle has been significant. Today, in all but a handful of our largest cities, over 85 percent of the daily travel is by automobile, and to a large extent this automobile travel is forced to use outmoded facilities. While congestion is not new—we can find many references to congestion even prior to the advent of the automobile—the traffic jams that we are experiencing on many urban streets and highways is indisputable evidence that our improvement programs have not kept pace with the needs. Further, the experts almost unanimously agree that the urbanization process will continue, and possibly at an increased rate, so tomorrow's needs will be even bigger.

One redeeming feature about the present transportation difficulties is that they are the result of progress and broad economic gains. We should be able to find a solution. However, I doubt this can be done by any piecemeal approach whereby we classify our “bottlenecks” and then limit our thinking to the development of a program which will correct the deficiencies one by one—I suggest that the “finding of a solution” will require us to recognize the need for comprehensive transportation planning and then to actively set about doing it.

I'm certain many of you must question why I say we need to recognize “the need for comprehensive planning.” Planning, like congestion on our urban highways, is not new. Yet, largely because of shortcomings in our previous planning efforts, there is a reluctance on the part of many administrative officials to support planning. There have been too many instances in the past in which a plan has been prepared and then put in some bookcase to gather dust. Undoubtedly there are numerous reasons why this has happened, but I think there are two which deserve specific mention. First, we have the plan developed entirely by tech-

nicians—or experts if you will—which are not subjected to tests of feasibility or practicability, and are not carried through to the capital improvement program stage. Administrative officials, when handed these plans, quickly discover the shortcomings, conclude that the planners are floating on cloud 9 or cloud 99, and deposit the plan in the bookcase. Then we have the community leaders who apparently sincerely believe they can solve their problems by employing someone to prepare a plan, and that once prepared the plan will carry itself out. I doubt that we can find a single instance of success with this formula. Neither operation qualifies as comprehensive transportation planning.

Perhaps I can make clear what I think is involved in a comprehensive transportation planning process if we will consider first what we want with respect to our new urban highway facilities.

We want to locate and design new highways so they will reasonably satisfy the transportation requirements of the future, as well as to provide for today's needs. We want them to function as they are designed to function once they are built. We want them to be compatible with desirable neighborhood development. We want them to help shape orderly future development.

With these four principal "wants" in mind let's see what is involved. With respect to our first "want," when we attempt to assemble the data needed to locate and design new facilities we immediately recognize:

That the distribution of activities such as employment centers, residential areas, business districts and recreational areas dictate the origins and destinations of traffic.

That the volumes of the total movements between areas are directly related to the magnitude of the various activities—or to the intensities of the land uses.

That the capacity required in highway facilities is dependent on the relative amount of the total demand that will be satisfied by transit.

That the need for any particular highway is dependent upon capacities provided in alternate routes.

Our second "want" is that facilities once built function as they were designed to function. This is possible only if full consideration is given to arterial and feeder streets and to parking requirements. In addition, over time, they can continue to function as they were designed only if controls over land development are adopted and enforced. We have little difficulty in recalling numerous instances where carefully designed facilities have been seriously crippled by the introduction of an unexpected industrial plant or supermarket near an interchange.

Our third "want" is for new facilities to be compatible with neighborhood development. We must then have some knowledge of the probable character of the future neighborhoods when we select a location or determine a design. This leads us into land use controls such as zoning, subdivision and building codes and urban renewal which all play a part in establishing development patterns.

Our fourth "want" is to utilize highways to help shape the future community. Without question, new highway facilities exert an influence on future development. The building of new highways not only makes additional land accessible, but changes the relative accessibility of land already developed. Changes in accessibility tend to cause changes in land uses. The responsibilities of the highway planners in this regard must be fully recognized, and consideration must be given to the order of improvement as well as to the overall plan, if desirable patterns of development are to be attained. To illustrate the importance of the order in which improvements are made let's consider the not uncommon situation of the urban area that proposes to construct both an innerbelt around the central business district and an outer-circumferential highway. Is it not probable that

the future development will be greatly affected by the decision as to which is to be built first?

I have belabored the subject in this manner in order to emphasize the interaction between transportation and land use. Land use enters into all of our highway planning determinations so we must conclude that transportation planning and land use planning must be integrated. But this is not all that the process implies.

In practically all instances we find that we cannot start and stop our planning at city limits. Even if we could we would find in most cases that the State and Federal Governments are involved in many of the decisions that influence future development. Our planning process then must include all of the interdependent parts of the urban community. Further, it must be a cooperative undertaking and, as such, must involve all levels of government as well as all agencies that make decisions which influence future development. The availability of technical procedures is not enough to assure the success of a planning program. It must be properly organized, at the start, to provide genuine continuous cooperation and collaboration.

We need only to reflect momentarily on the differences in the interests of the various agencies and political jurisdictions to recognize that this part of the process is not simple. However, if we remember that it is men who cooperate, not agencies, and if we define cooperative undertaking as active participation in the step-by-step development of plans, will we not be increasing tremendously the possibility of accord?

Next, regardless of how much time we spend preparing plans, or how good the plans may be, they are of little value unless they are implemented. This requires that planning be coordinated with policy making and administration.

At this point I think it appropriate to remind ourselves that most new development is created by private enterprise rather than by governmental bodies. The development can be guided by improvement programs directed and financed by governmental agencies. It can be controlled only to the extent that the necessary regulations are accepted by the public, as policies which do not have the support of the people cannot be effective for long.

Further, our real objective in this planning process is to satisfy the desires of the individuals in the urban community—not necessarily to provide the type of development thought best by experts. We do not, of course, want the people to make capricious decisions, so it is essential they be kept fully informed. The establishment of realistic objectives presumes the weighing of various alternatives with respect to both the benefits and the consequences of proposed actions. The people must be provided all of the information necessary to make these evaluations.

Administration has to be brought into the process to insure that capital improvement programs will be formulated in keeping with the "plan" desired by the people.

Finally, we must recognize that our plans, if they are to be of value, must be kept up to date. A plan is merely the framework on which we show our best estimates of the physical locations and dimensions of the land uses and the transportation system at some future date. Our knowledge of the factors that influence or determine development patterns is not yet sufficient to permit us to rely on our estimates. Unfortunately, oftentimes, development does not take place as we anticipate it. We must, of course, continuously take actions on the basis of the best knowledge available when the decisions must be made, but we should also provide for the continuous updating of the facts on which we base decisions. In addition, it is always necessary to update our thinking with respect to technological advances and to the wants and desires of the people which change over time.

I should like to summarize by stating that we can go a long way towards solving our urban transportation problems if representatives of all jurisdictions and agencies which make decisions affecting future development will actively par-

icipate, step by step, in a continuing process which integrates land use planning and transportation planning and which coordinates planning, policy making and administration.

Since I am certain there are many who are skeptical of the possibility of success of such an undertaking, and others who believe that urgency requires shortcut procedures, I am going to risk the possibility of boring you by repeating some of the limitations which cannot be ignored.

1. We cannot plan highway improvements individually one by one.
2. We cannot plan highway systems without considering transit.
3. We cannot plan transportation systems without considering land uses.
4. We cannot expect agreement on our plans unless all agencies and jurisdictions participate in their preparation.
5. We cannot expect acceptance of our plans unless they are practical of attainment.
6. We cannot expect acceptable action programs to be initiated and carried out unless we coordinate planning, policy making and administration.

In this discussion I have directed my comments toward the planning of new facilities. Reference to existing facilities has been omitted only for purpose of simplification. Certainly we are going to build on to what we now have and consideration must be given to improvements, both physical and operational, of our existing streets.

I have said nothing about the nature of the studies that are necessary to produce a plan. We usually describe these studies as a series of phases which proceed from inventories through forecasts to the preparation and testing of transportation plans. Inventories are taken of facilities, travel and land use, and from these data the relations between travel and specific land uses are computed. Forecasts are made of future population and economic activity and the probable geographical distribution of future land uses is estimated. Future travel is then forecast usually in two steps. First, trip generation rates obtained from the inventories are applied to future land uses to determine the number of trips that will begin and end in any area. The trip ends are then linked to obtain the travel between areas. Estimated travel demands are compared with the capacities of existing facilities and networks are defined to satisfy the travel requirements and to meet established objectives and standards. Trips are assigned to specific routes, and finally the results are tested and evaluated and the necessary alterations made.

This all sounds quite simple. It is actually extremely complex and I wish to make clear that many of the technical procedures do not provide precise answers that can be accepted without considered appraisal. I do believe that the concept is sound and it does permit the evaluation of various alternatives. With additional research I'm certain our technical procedures will be improved.

You will be interested in some recent developments which will stimulate planning efforts. The Bureau of Public Roads has recently given added emphasis to the planning function by establishing an Office of Planning. Heretofore planning and research have been the responsibility of a single office. In the new Office of Planning we will have a division devoted entirely to urban problems, and we expect to increase our efforts to improve planning techniques as well as to provide additional technical assistance to the States and local units on specific planning projects.

Public Roads and the Housing and Home Finance Agency are cooperating to insure to the extent possible, that Federal funds from either source available for planning can be used to best advantage, and that each will complement, not duplicate, the other. Through a committee in Washington and parallel regional committees each agency is kept informed of the other's problems.

The American Association of State Highway Officials and the American Municipal Association have for several years had a Joint Committee on Highways which has done a great deal to bring about a better understanding of each other's problems. This committee recently adopted, and the respective Executive Committees of their parent organizations approved, a long range effort to develop transportation plans and programs for every city over 5,000 population. To inaugurate the program the Joint Committee envisions a series of meetings at which state, city and county officials, civic and business leaders, and other appropriate people will participate in discussions of what is involved. Public Roads shares the confidence of the Joint Committee that this major program can be effectively carried out.

Many of the State highway departments and many associations and groups interested in transportation are also directing additional efforts toward improving transportation planning.

While these additional efforts are encouraging, I believe we should all be concerned about the growing criticism of one or more aspects of the highway program. Some of the arguments advanced by our critics may be sound and factual. Others most assuredly are not. To the extent that the criticisms are misleading, half-truths, or outright friction they are damaging as they obstruct any objective approach to realistic decisions. Those of us who believe in the highway program should make every effort to get the truth to the public. If any of you have not read the article by Robert Moses in the January 1962 issue of Atlantic Monthly I strongly recommend you do so.