
LOWELL K. BRIDWELL, Federal Highway Administrator

• THE mobility of the American people and their private and public institutions is greatly aided by the transportation system—obviously including highways. It is not necessary to comment about how valuable highways are, or how much of a contribution they have made to the economic, social, and cultural growth of America. The contributions are obvious and only the narrow-minded would contend otherwise. Instead, it is time to discuss more thorough, more detailed, and more effective ways to integrate highway development with present and future economic, social, and cultural growth.

In this day of restlessness, questioning, and dissent, we are bombarded with tired old cliches. We are regularly given so-called simple solutions to complicated problems. Too frequently we are told—and we tell ourselves—that we face only stark, bare, black and white alternatives.

This is nonsense. What we really face is a challenging opportunity—an opportunity to transform highway transportation into an economic, social, and cultural development tool far beyond anything available up to now.

The highway facilities in the United States have materially and substantially aided in making possible the opportunities we enjoy every day. Starting with the grandfather of limited-access highway facilities—the Pennsylvania Turnpike—we have learned how to build superior facilities for the fast, relatively safe, economic and convenient movement of people and goods by motor vehicle.

However, the planning, locating, and designing of facilities for highway transportation is not good enough for today, and it certainly is not good enough for tomorrow. Yet, what is planned and built today will exist for many years to come.

Anyone who pays attention to the public must realize that the restlessness, the questioning, and the dissent that pervade our society are equally applicable to highway transportation. Dissent and opposition take many forms, but they are implicit when people talk, even inarticulately, about the "urban crisis," about the "quality of the environment," about "urban design," and many other phrases that connote the problems associated with masses of people living, working, and playing in relative congestion.

The dissent and opposition are explicit in such phrases as "Chinese wall," and "concrete monster," and "big ditch." Another complaint is that a highway would be a "biological barrier" because it would disturb the ecological balance of the area it traversed.

These phrases contain both truth and fiction. For those who are blind and resistant to the will of the public—even the minority—these phrases are dismissed as complete fiction. For those who are too timid and afraid to face the disquieting challenge of the future, they are accepted as truth equal to Holy Writ. However, these phrases must be accepted for what they really are—expressions of relative degrees of dissatisfaction, expressions of challenge to do better, and expressions of public belief that the development of highway transportation and its facilities must be much more closely related to a whole range of other public and private policies being developed simultaneously.

The following is an admittedly oversimplified analogy: Imagine an engineer or an architect designing an elevator shaft and carriage without any concern for the building
it is to serve—ignoring not just the number of square feet in the building, but all of the human activities that will take place.

In the final analysis, an elevator is a vertical expression of a transportation facility that can be likened to a horizontal facility in the form of a highway. The building the elevator serves is not unlike the bigger, broader, and more complicated area served by the highway facility.

Elevators are commonly designed as part of the buildings they will serve. In too many instances, the close relationship necessary between a highway facility and the neighborhood it serves is not adequately evaluated and analyzed and planned in terms of the intimate human activities that take place in and around that neighborhood. This is the fundamental reason why in city after city, real, intense, meaningful opposition has developed to the planning and construction of certain highway facilities. They are becoming all too numerous. Boston, New York, Philadelphia, Washington, Atlanta, New Orleans, Nashville, Memphis, Cleveland, Chicago, Baltimore, San Francisco, and Seattle represent only a partial list.

The situations in these cities are neither isolated nor unusual. They are symptoms of what has popularly been called the "Anti-Freeway Revolt." The "revolt" itself, however, is also a symptom. It is the manifestation of a breakdown in coordination of the values and assumptions and goals of urban dwellers on one hand with those of highway developers on the other hand. It is the manifestation of a failure on both sides to enter into the kind of communications that would close the gap. The results can be wasteful and costly delay in the provision of needed transportation facilities, and painful and unnecessary degradation of non-transportation urban values. Is the situation so deep-seated as to defy solution? Or, as recent events in a few cities indicate, can it be resolved in favor of better cities and better highways?

Both are obtainable if substantial modifications in methods of doing business and, more importantly, in attitudes are made.

Highway planning, notwithstanding all of its highly diverse and complicated engineering detail, is not and cannot be a completely quantifiable process in which all elements can be measured and tested, and assigned numbers representing cost, capacity, and other criteria going into the decision process. To do that, we almost certainly would be ignoring, or at least not giving adequate weight and value to, the unqualifiable elements that are equally important.

How do you measure the social viability of a neighborhood? How do you assign a number value to the social maturity and stability of a residential area? How do you test and assign a cost to the convenience of children going to an established school district, or parishioners to their church?

Lacking that ability to measure and test and quantify, we can weigh these factors properly only if we bring the right kind of talent to bear on the subject—talent able to dig deeply enough into all of the social, cultural and economic factors to thoroughly understand them and then evaluate them with the attitude that the highway facility is only one element or thread in the fabric that represents the city, neighborhood, or area concerned.

We are not choosing between a highway facility and the quality of the environment. Instead, we are analyzing, evaluating, and making decisions within our policy and program responsibilities that will have consequences for good or bad in an influence area far beyond the edge of the right-of-way.

In order to accomplish this difficult and complicated task, we need the kind of talent, training, and experience that is represented by several disciplines. The design of a highway is an engineering task. The planning and location of a highway facility involves many considerations other than engineering.

Recently, a witness before a Senate committee characterized highway engineers as about equal to plumbers—an obvious intended insult. All the gentleman really accomplished was to show his own stupidity and prejudice.

I am not aware that God granted all wisdom to any particular discipline. What I am aware of is that no single professional discipline represents all of the talent and training and experience necessary for the task we face.
It was this recognition that led to the formation for Baltimore of a multidiscipline team to plan and conceptually design the city's limited-access highway system. The team is, in effect, a prototype. How well it will work remains to be seen. The specific institutional arrangements, which we label the "Baltimore Design Concept Team," may or may not be the best way to go about the job. The development of the Team is, however, a recognition that the tasks are so complex that various talents are needed to work on them. It is not the only method; others will be tried in other locations.

The Team, which represents engineers, architects, sociologists, urban planners, economists, and others, was assembled to examine the highway corridor, and location and design alternatives within it—and all of this in the framework of overall community goals and plans. On the basis of its analysis, the Team will recommend to the city and the state a program for the development of highways and other community improvements to achieve identifiable opportunities in the broadest range of community values.

The Team is subdividing its activities into three time frames: development of its conceptual framework, followed by feasibility and schematic studies, followed by actual design of the programs it will recommend.

Within each time frame, smaller "teams" are assigned specific tasks. One team is undertaking analysis of the entire transportation system, present and projected, as a basis for coordination between that system and the planned highway segment. Another is conducting in-depth study of the broad area through which the corridors pass, determining the qualities, quantities, and values of its social, economic, structural, historical, and open space characteristics. This Team, which is spending much of its time talking with and listening to groups and individuals in the corridor, ultimately will be looked to for identification of neighborhood hopes and needs that should be fulfilled in the resulting projects.

A third team is exploring the opportunities for "joint development" (multiple use of space) above, below, and along the highway presented by the project. Their work ranges from abstracting pertinent zoning laws to analyzing current and needed housing, industrial, and school development plans. At a later point in the planning process, they will also become concerned with structural design questions presented by potential joint development opportunities offered by the highway.

How could fragmented and uncoordinated programs and funds of three levels of government and the private sector be pulled together into the cohesive force necessary to translate the planner's products into applied programs? The job of a fourth team within the "joint venture" is to find the answers to that question.

A fifth team is concerned with the design of a harmonious highway facility that will meet the highest attainable engineering, safety, operating, and esthetic standards. A sixth provides close and constant liaison between the joint venture and governmental programs. Finally, a monitoring team carries oversight responsibility for the entire process.

At dozens of points, formal review and coordination will be required between and among the various small teams. In addition, they work together on a day-to-day basis, sharing talents and resources whenever necessary. At key intervals they will submit progress and planning reports for review by the city and the state.

Public meetings to discuss the project already have been held in neighborhoods and communities along the corridors, in addition to scores of less formal contacts between the planners, city and state officials, and citizens and business interests. The joint venture and neighborhood groups will maintain local offices in neighborhoods along the corridor, at which personnel and material will be available to explain details of the planning process and to listen to the views of residents and businessmen.

There has been some grumbling, of course, from those who believe that the system has been needlessly and expensively delayed by the planning process. One cannot deny there have been delays. But do not overlook the alternatives to this kind of delay—alternatives that include a poorly designed and disruptive highway through the city; a loss of irreplaceable community values; a missed opportunity to substantially improve the quality of living in the city; possibly, placards and court suits; possibly, no highway at all.
Perhaps most important of all, the city, state and federal governments, the businesses, churches, schools, and the whole community will know that full resources were brought to bear on the program. In the final analysis, the success of the highway program—or any public works program—in any city will depend on the initiative of the people to identify and articulate their own future. As highway developers and as citizens, we must do everything within our power to foster that initiative.