

to work all of these simultaneously. For example, we have a multiyear program that is required by law. It spans a 12-year period. Our previous 6-year program got so big that the political forces chose to double the time for it, because all their projects wouldn't fit within a 6-year time frame. In point of fact, however, we have divided our 12-year program into three time horizons--4, 8, and 12 years; 12 years is our view of the long term, and we are willing to look at almost any idea at that level. The term of federal funding is 4 years, though, and we want projects to be real. We want to have the kinds of facts that lead us to delivery of products.

In Pennsylvania, the programming process has become credible. We have delivered some 2,000 projects from our 12-year program, worth billions of dollars. The product of our planning has become credible only because the process has delivered results.

We have also added to our planning philosophy the concept of strategic planning. We have put a large emphasis on trying to understand what the agency is about, what it can deliver, what, in fact, is the business that we are in. I think transportation agencies need to ask themselves those kinds of questions, and each manager within the agency has to ask

such questions periodically. We think that this business concept, following from our overall administration themes of economic rebirth and community conservation, gives us a sense of reality about where we are and who we are and that is very healthy for us. We believe strongly that pavement management and some of these basic programs have to be integrated into the planning process or you'll simply miss the major investment streams with your planning impact. Follow the money and you will clearly have some impact on your agency.

In short, the planning we are now doing in Pennsylvania bears little resemblance to the classic transportation planning that raised expectations so outlandishly during the 1960s and 1970s. We still look to the future, but we create Pennsylvania's image of the future, not through computers or mathematical models but through the collective vision of the people of Pennsylvania. Computers have been relegated to the task of managing information. Planners, managers if you will, use this information for decision making where the world does indeed move into the future by decisions and not as a result of plans.

The Evolution of Transportation Planning in Texas

MARK G. GOODE

The Texas Department of Highways and Public Transportation was officially formed in 1917 after Congress set up the first federal-aid act, and our responsibility as a highway department at that time was to plan and construct, with the help and cooperation of the counties, a paved roadway system to connect all the county seats. That in itself turned out to be a pretty good chore because we have 254 county seats, but it was a very close cooperative operation between the state and the counties.

The first plan, this trunk system, during the formative years of the Department of Planning was accomplished through complicated negotiations between our district representative and local officials. We have always maintained a close communication between our district offices and the city and county officials. In the early years of the department this was primarily with the county officials because we originally had very little or no jurisdiction inside the cities. In the development of the statewide system to connect the county courthouses, or county seats, our job was to work closely with the counties and the counties' first responsibility was to furnish all the state highway right-of-ways.

In fact, the counties furnished all the state highway rights-of-ways for our department until about the mid-1950s when the Interstate system came into being; at that time we shifted to a 50-50 participation where the counties or cities furnished 50 percent of the cost of the right-of-way and the state put up 50 percent. This division has been

changed to one in which the state picks up 90 percent of the cost and the city or locality retains a responsibility for 10 percent. We believe that this is important because it gives the cities and the counties a very definite veto power to prevent the state from doing something they don't want. It does have some adverse aspects from time to time. Those of you in the planning business certainly are aware of the sections of highway built because of local interests and of the difficulty in some of the counties that are strapped for funds in encouraging them to put up their matching 10 percent for such highways.

In the early years we concentrated on the roadway design standards, proper physical spacing for arterials, and required system continuity necessary for meeting each area's anticipated growth. In the early 1940s, our department was staffed with a Director of Urban Planning to assist the local areas in developing their plans. During the 1950s and early 1960s, plans for highway development became more data oriented as urban areas began making greater use of vehicle count and driver survey results. Up until this time, the level of formal planning varied between areas but the process was constant in the effort to maintain cooperation between the department and the local officials. Until we got into more formalized planning, our planning department was primarily involved in technical data collection and the first responsibility was map development. The planning department was developed originally to map

the state and all the county roads as well as the state system. That expanded into actual traffic counts and traffic projections.

Investment of local governments in transportation planning was formalized in the 1960s with the passage of the Federal-Aid Highway Act of 1962. Section 134 of the 1962 act stated that before federal approval of any project in an urban area of at least 50,000 population could be granted, such projects needed to be based on the continuing, comprehensive, and cooperative (3C) transportation planning process, carried on by state and local officials. I envisioned this in its early stages as nothing more than a formalization of what we had been doing with our counties and cities. All the district engineers, especially in the metropolitan areas, worked with the counties and the cities and actually set up a transportation system. In the major cities that had staffs for planning we could utilize their own transportation plan and work it into our plans for the counties. We worked very closely with them in scheduling and planning projects. Those who were involved in the early development of planning in Texas in urbanized areas recall our feeling that the red tape was plentiful and the funding inadequate. However, as the years have passed we look back on the 1960s as perhaps the golden age of transportation planning.

Because of the difference between long-range plan components and the political reality of the day, local governments needed financial assistance to develop plans to address their most immediate and critical needs. Transportation system management, sketch planning, and short-range transportation improvement programs, building out of the federal requirements, were the basics. No one in our state would argue that cities and counties did not need financial help to assist the state in the development of more strategically focused transportation plans. The result was the Federal-Aid Highway Act of 1973, which set up the Section 112 or PL funds for urban transportation planning. Wording in this act appears simple: it charges the state with developing a formula and distributing the planning funds to the urbanized areas of the state in a fair manner. It also states that these funds are to be made available to the metropolitan planning organizations (MPOs) designated by the state as responsible for carrying out the Section 103 planning. This seemed appropriate phrasing for us in Texas, because at the time we had 23 study offices within the department that had been responsible for performing Section 134 planning for their metropolitan area.

This was perhaps the low point in cooperative transportation planning efforts in Texas. The cause of most of our difficulties was the joint planning regulations generated by FHWA and UMTA in 1975 to implement the 1973 act. Although it is becoming increasingly common for federal rules and regulations to strengthen the law that they were intended to implement, it is most distressing for these rules and regulations to begin encroaching on responsibilities that belong to the state and local governments. Such was the case with the joint planning regulations. They elevated the MPO to a new and a complex position. The regulations appeared to remove from the states and local governments the responsibility for transportation planning and placed this responsibility in ad hoc MPOs. The responsibility for such planning in Texas is vested by state law with the state highway department as the recipient of federal funds. Adding to our problem with the regulations was the associated confusion in attempting to interpret them. In Texas, federal officials sent to interpret the regulations were incorrectly reporting

that councils of government (COGs) had to be designated MPOs. Adding further confusion to the regulations was the misnomer "joint regulations." It was soon shown to be untrue that FHWA and UMTA would follow the same rules and procedures, the strongest point of difference being federal funding procedures. Into this confusion we all stepped, each with our agency's interpretation of what the legal intent of the regulations was.

Agencies became polarized on the issue and we struggled through a period of redefining our working roles within the transportation planning process. The basic problems associated with the MPO concept are still unresolved and are of concern to state and local governments in Texas. The federal definition of the expanded role of the MPO creates a vagueness as to who is responsible for Section 134 planning in the state.

In regard to designated MPOs an array of structures has evolved in Texas that reflects the needs of each area. We have in Texas 25 designated MPOs, of which 12 are cities, 7 are COGs, and 6 are the steering-committee-type structures. Within this framework, the staffing responsibilities for actually performing the planning work vary even further. The majority of the cities and COGs designated as MPOs perform planning work through in-house staffs or consultants. But most of these MPOs share some part of the planning responsibility and planning funds with other local government staffs or our department study staff. In an area where a steering committee is designated as MPO, planning funds are passed through to one or more local governmental planning staff of our department study staff. We thus allow our urbanized areas to operate in a style that suits their local needs. We try to give as much flexibility as possible to the MPO's designation because, in the end, the governor actually designates which organization is to become the MPO in each area. You need the MPO in order to get complete clearances on federal projects.

Texas' position on transportation planning is that it is necessary. This dynamic process, which brings together local officials, state officials, and technical professionals to define possible past to possible future is of considerable value. But the results of such efforts must be credible and workable. Transportation planning has been, until recently, primarily long range. Its focus has been the distant future and its concerns separate from the daily problems of transportation. But most states and urban areas face serious financial problems, limiting their ability to make commitments to anything but the most immediate and critical action. The call is clearly for a balanced emphasis between short- and long-range planning. Imagination in the development of low-capital measures is appropriate as well as in the development of high-capital measures. In Texas, we believe that long-range regional transportation planning must continue to play a vital role.

The last stage of balanced long- and short-range planning is system recommendation, not selection. The selection and approval of a project must continue to rest with the implementing agencies and not advisory agencies or MPOs. I think that this is one of the major misconceptions that resulted from the 1973 act. MPOs made up of many small communities have no financial responsibility for implementing any plans. No effort was made to make their planning responsive to the availability of funds, and if you are going to be responsible for the planning, it must be done by those who have the financial responsibility to implement the plan.

At one time, we developed what we called a 20-

year plan. We worked on it from the standpoint of anticipated funding for 20 years, but we now believe that we need both a long-range plan and a short-range plan. Over the next 20 years, the population of Texas is projected to go from more than 14 million to more than 21 million. Texas is supposed to be second to California in population by 2000. That's a 50 percent increase in the population of the state. We can't work with a short-range plan in this circumstance, so we are working on it as a 20-year project development.

We don't see many new roadways being built, but we do see the need for preserving and expanding the capacity of the existing system. We are going to develop a 10-year project development plan that will, it is hoped, realistically fit what funding

can be expected in the 10-year time frame. As the time frames get shorter, of course we can be much more accurate in the projects and their scheduling.

But these time frames have to be coordinated with funding, and there must be the ability to adjust whenever drastic changes occur in funding. There must be alternative plans and plan flexibility that will fit project funding. I think we were guilty in many instances of having the communities expect more than we were ever able to produce because of long-range plans, and I think it worked to our detriment.

Implementing agencies charged with responsibility of deciding the most appropriate strategies for achieving planning consistency must perform the selection and staging of projects for the programming process.

The Evolution of Transportation Planning: Iowa's Perspective

C. I. MacGILLIVRAY

To be useful and effective, planning must continuously adapt and respond to change in conditions, issues, and decision-making needs. In a certain sense, a time line of transportation events is simply a chronicle of the way that planning has responded to change in decision-making needs and to the availability of new tools, knowledge, and understanding. By taking a look at the evolution of planning and forming some judgment about how well planning has responded to change, we may come away with some ideas that can help as we face a whole new set of trends, issues, and needs.

Probably the first indication of need for some kind of highway planning, at both the state and federal levels, concerned the issue of route continuity. Our first plan in Iowa was laid out long before highway transportation was understood in its present context. Early surveyors recognized that Iowa was a flat place, and they laid out a grid system of roads. In fact, that's the biggest control we've had in transportation planning in Iowa ever since. That was in the 1860s.

That surveyor (or planner) was kind enough to locate most county seats in the middle of a county. So, with the advent of early urban development, our second-generation plan became more sophisticated. We connected the county seats and had a grid system of main routes. That grid is still such a dominant factor in transportation planning that we actually have outlawed diagonal highways.

With the advent and rapid increase in the ownership of automobiles came the desire for long-distance travel and a corresponding need for an interconnected road system with the characteristic of continuity and service. In Iowa, at the time this need was being felt, there existed considerable sentiment against the concept of state control of

highways. With each county responsible for developing and maintaining its own road system, the result was a patchwork of highway service defined only by county borders. It was impossible to effectively meet the travel needs as they were developing at that time.

The Federal-Aid Highway Act of 1921 may be considered a milestone for Iowa. It provided the mechanism that led to state responsibility for the primary road system in 1927. The 1921 act essentially made eligibility for federal aid contingent on state control of federal-aid roads. With this came the state's authority to make improvements based on their contribution to a planned or coordinated system.

So, although planning, in the sense of defining a highway network to meet travel needs, had begun in Iowa as early as 1917, until 1927 the state had no power to require that improvements be made in accordance with a plan. Once this authority was established, system planning became an important and ongoing activity. In fact, the development of a highway system to serve travel demand safely and in a manner consistent with the nature of that demand has been a dominating objective in transportation planning at all levels of government ever since that time. Our forecasting efforts, functional classification, and needs studies have all become well-developed activities used in support of system planning. Network planning has been an appropriate response to a trend of continuous growth in travel demand. Questions then were these:

1. Where will facilities be needed--what is the demand?
2. What kind of facilities should be provided--how will they be used?