

# Future Directions and Emerging Issues

KEVIN HEANUE, GEORGE T. LATHROP, AND JIM CHARLIER

## KEVIN HEANUE

I have been asked to cover three topics: the emerging issues conference convened by FHWA last fall, our in-house futures efforts, and planning research needs.

## EMERGING ISSUES CONFERENCE

Some 14 states and 20 Metropolitan Planning Organizations (MPOs) were represented at the emerging issues conference. One of the lead questions was, Are today's transportation planning policies adequate? The conclusion reached was that existing policy is generally satisfactory. The states were more satisfied than the MPOs, but the states did recommend more flexibility in the administering process in areas with under 200,000 population.

The MPOs sought a more active role, expressing a desire to be given more assignments by the states and the "feds". They wanted to be more proactive and less responsive. They wanted to include long-range planning in their work programs, characterizing existing MPO planning as too reactive to project proposals coming from state and local sources.

Another emerging issue concerned planning resources. Those states completing their Interstate System are experiencing a serious shortage of HPR funds and a pattern of staff cutbacks. As a result, they have a limited ability to take on additional work.

Even more serious was the problem of noncompetitive state and MPO salaries, staff turnover and great difficulties in hiring either experienced or entry level staff. Hiring staff, getting them up to speed, and having them hired away was described as a particular problem of the smaller MPOs, which generally only have one or two trained planners. Employee retention was described as a critical problem in administering transportation planning at all levels.

Corridor preservation and access control came in for extensive discussion. Neil Pedersen described the work of the AASHTO task force. The discussion centered on making NEPA work in support of long-range planning rather than constantly being dictated to by the EIS process. The practice of waiting a long time after plan development to initiate project imple-

mentation has to be ended. A desire to experiment with corridor preservation under police powers was expressed. States must begin using authority that local governments are exercising in corridor preservation and access control. The group expressed a need to experiment with different approaches to the NEPA process.

Another major topic area was data management at the state and MPO level. Microcomputers are causing a revolution in transportation planning. There are now computerized systems for weigh-in-motion, automated counting and classification, geographic information systems, pavement management, bridge management, safety or accident record keeping and maintenance management. Many organizations initially have five or more parallel automated systems in different organizational units. Increasingly states are bringing together within the planning unit a single automated data base, with a single geographic control system.

A related discussion covered the rescaling of planning tools so that they will address topics like pavement management and bridge management. The difficulty is in determining how to plan for rehabilitation within the same framework of planning for major capital investments.

An interesting discussion took place on environmental issues. Both the states and MPOs expressed a desire for greater planning involvement. There was a dichotomy between those states where the EIS and project development unit was an element of planning and those where it was not. Those states with different organizational units involved in the project development process expressed the need to close the gap.

Air quality was another subject of discussion and of frustration, particularly on the part of those states and MPOs with air quality problems. The Los Angeles and Denver areas were represented at the conference. The conclusion reached was that legislation must resolve the issue and most of us cannot productively get involved until the Congress sorts out the ground rules.

A discussion on coordination targeted the feds. Representatives of states and MPOs expressed frustration at the apparent lack of coordination between the Environmental Protection Agency (EPA) and DOT and within DOT between the FHWA and UMTA. I accept this criticism. Improving coordination with EPA is going to take legislation. At one time, FHWA and UMTA worked very closely together. We have definitely drifted apart but we are committed to coordinating appropriate elements of our programs.

A wide-ranging discussion took place on research. Topics included: travel behavior, transportation and economic development, truck forecasting, analytical tools for traffic opera-

K. Heanue, Office of Planning, FHWA, U.S. Department of Transportation, 400 7th Street, S.W., Washington, D.C. 20590. G. T. Lathrop, City of Charlotte Department of Transportation, 600 East 4th Street, Charlotte, N.C. 28202. J. Charlier, Florida Department of Transportation, 605 Suwanee Street, Tallahassee, Fla. 32399.

tions, and in general, microcomputer application tools for transportation planning. That list went on, but those noted rose to the top.

Other issues cited, not as research, but as emerging issues were (a) the institutional questions still prevalent in some states, including the MPO role in programming, and (b) performance planning (Bruce McDowell of ACIR gave a forceful argument for performance-based planning, arguing that "what gets measured gets done," and hitting a very responsive chord among participants).

The role of long-range planning and urban and suburban congestion were additional major topics that I do not have time to go into.

### FHWA FUTURES EFFORT

Let me shift gears now and talk about the FHWA Future's work. Les Hoel gave an excellent overview not only of our work but of the other key participants in the 2020 process. I am going to try to emphasize a few points from my own perspective.

First, there is no doubt that the trend is toward a much lower rate of travel growth, driven by a much lower rate of population growth. Population is projected to increase at a rate of well under 1 percent as we move toward 2020. FHWA projects VMT to grow within the range of 2 to 3 percent. Within FHWA we had advocates of the 2 percent level, a level suggested by serious analysis of demographics. Others favored 3 percent, which is supported by current traffic volume trends of 3½ to 4 percent month after month. We were dealing with a 1984 to 1985 base and now 5 years into the forecast period, growth is not slowing. I am reminded of the old adage that it is almost impossible to overestimate future travel. Our models yield a growth rate of 2.4 percent, which also happens to equal the independently estimated aggregate state HPMS growth rate. This 2.4 percent average hides wide variation among different parts of the country. Some the farm and plains states have no growth, and some booming urban areas have growth of 6 to 8 percent annually.

Let us now consider congestion. A high percentage of the Interstate links in our major metropolitan areas are congested. Half of all congestion is not recurring but is incident based. We heard yesterday of smart cars, smart highway and then smart money. I think we need smart "incident managers" to do something about the half of congestion that is nonrecurring. The idea of a federal role in the incident management problem is particularly intriguing.

In our futures work we also looked at the benefit/cost relationship. We added a benefit/cost algorithm to the end of the HPMS system and looked at investment levels 10 percent below the present levels and then 10, 20 and 30 percent above the current levels. The results showed positive benefit/cost ratios at all investment levels over all functional classes. This finding is another way of demonstrating the seriousness of the transportation problem.

In general, the benefit/cost ratios were higher in urban areas than in rural. Other principal arterials (non-Interstate principal arterials) were better investments than further improvements to the Interstate system, which just demonstrates that it is very costly to widen Interstates to gain additional capacity.

I want to now turn to investment requirements. First let me say that the 2020 process, in my judgment, places too much emphasis on dollars and not enough on defining the problem. Henry Peyrebrune said yesterday that we have all underestimated needs. I support that statement. Estimates by FHWA show that to maintain existing conditions with a 2 percent growth rate in VMT, we should be investing \$25.9 billion a year. At the other end of the range is the \$39.4 billion estimate to meet full *constrained* needs at a 3 percent growth rate in VMT. This is the estimate you get when you do not widen an Interstate that lacks available right-of-way, but rather cost out all other arterial and collector needs. So, the range of needs is \$25.9 billion to \$39.4 billion. These estimates do not include local system investment. Today we are spending \$31 billion in capital at all levels including what is spent on local systems. Even though the numbers do not take into account the "local system" difference, I conclude that today's investment levels are at the very low end of the scale to maintain current system performance. The HPMS supports this conclusion, showing that we are making progress in pavement condition and losing ground on capacity. The composite index is about flat.

The HPMS monitors the existing highway system. It does not directly consider new facilities on new locations. You always have to adjust for new facilities that represent additional needs.

With respect to the post-Interstate program, I argue that our immediate problem is not dollars, but concepts. Everyone seems to be buying into the general idea of a system of national interest and a block grant; but beyond those broad concepts, we have a long way to go. There is no consensus on the federal role.

I perceive a real problem in how to reflect multistate corridors in the new program. The FHWA is working on 15 congressionally mandated studies of corridors, including Shreveport to Kansas City and St. Louis to St. Paul. Maryland and Virginia are considering eastern and western bypasses of Washington, D.C. How do we integrate these future system needs into our thinking?

We also have the problem of low-growth states versus high-growth states, urban versus rural and a whole host of equity issues to be addressed. Beyond that is the flexibility issue. The local participants in the 2020 process want to talk highway/transit funding flexibility even on the system of national significance, which FHWA staff has not been thinking about.

Tom Larson was quoted yesterday. The quote was that a successful launching of a new program requires three things: "vision, a positive authorizing environment and organizational capacity." Where do we stand? The vision is not going to come from a dollar level, but from concepts. As I listened to the discussions yesterday, I noted that the states with successful gas tax increases are selling solutions, not problems. And thinking back, the 1982 nickel was sold on the solution. We had potholes and it was quite clear most of that nickel was going to go to repair our infrastructure, and that translates into a solution.

Now let us consider the dominance of urban congestion in terms of our post-Interstate needs. You cannot merely ask for dollars to solve urban congestion. Once we are asked the next question, what are we going to do with the dollars, we are confronted by the fact that we do not yet have a good set of answers. I am hearing a lot of talk about flexibility. System

performance expectations and proposed solutions vary around the country, depending on what part of the country and what size urban area you are dealing with. It is difficult to translate flexibility into a vision!

Organizational capacity breaks down into federal, state, and local. I do not think anyone is arguing for a more extensive federal role. The real tradeoffs are between state and local. Yesterday at one of our breakout sessions, a local participant said that he could see all this coming down to the feds and the locals striking a deal, and the states not being able to get their perception. I am not suggesting that the feds and the locals have any common agenda.

This afternoon, we will be talking in much more detail about the system of national significance and where it stands. So, I am not going to comment further now.

I would like to close by touching on the topic of planning research. The whole infrastructure debate in the country fostered much needed research in materials and pavements. The SHRP program was initiated with significant funding. Planning topics in the NCHRP program have not been popular in recent years. Two to three years ago, the Group 1 Council of TRB, which covers Economics, Finance and Administration, began an initiative to highlight the need for planning-oriented research. Progress is being made and, yet, today we hear calls for smart cars, and smart highways research. There is an enormous head of steam behind it. I would argue that we are not going to solve the problems of urban transportation "in the car" or "on the highway," that is, within the right-of-way fences. There are much broader issues involving land use, investment priorities, density and shape of urban areas. We have gone for almost 15 years without looking at these topics, while our urbanized areas have restructured themselves. High-density suburban clusters, coupled with continuing sprawl, have changed the nature of travel. This phenomenon was documented in the 1980 census. It is continuing at a more rapid pace. I am not arguing against smart car and smart highway research but rather for a broader program.

Because the states essentially determine NCHRP priorities, we should all work together to get planning topics into that NCRP system and put planning back where it was in the late sixties and seventies, when some 60 percent of the NCHRP program supported planning or—some people don't like the term—"soft-side research."

#### GEORGE T. LATHROP

I will begin with my perception of statewide multimodal planning and then speak to my concept of an appropriate role for statewide multimodal transportation planning in the next decade, what it can be as well as what I think it should be.

For argument's sake, begin with the notion that planning is basically rational resource allocation. That probably is more true at the statewide level than at others. There is allocation between construction and maintenance, among modes, and certainly across geography. Basically, much of planning is determining how to spend money in the immediate future and, in many instances, in the longer term.

Does statewide planning exist? Has statewide planning really ever existed? Is there rational allocation of a pot of money? I can argue both sides of the question.

I would argue yes, particularly if planning is defined as something short of actual decision making, because planners have had a significant effect on the decision-making process related to allocation and on allocation itself.

On the other hand, a very strong argument says no, there has been no statewide planning, or very little. I say that because, to a large extent our actions are prescribed by federal programs, state programs, legislative mandates, political considerations, and categorical dedications of funds. It is hard for us to say that planning is truly allocation of resources because, in many instances, the resources already are allocated for us.

What exactly are planners trying to do? Objective or rational planning was mentioned by a previous speaker. The economists would view it in terms of public welfare and optimizing. We want to be rational; we want to be good stewards of the public funds. We are interested in equity. We are interested in new economic development. All these objectives, to some extent, are abridged categorical allocations.

Planners at the statewide multimodal level, to answer my previous question, advise. Much of the decision making, in the end, is political or programmatic or both. Your job, as statewide planners, is to advise the legislature and the executive what to do in transportation and how to allocate those resources. Reality, however, tells us that they are not about to let us actually make the decisions. Of course, my specific job, with an allegiance to a local government and local elected officials, is essentially exactly the same.

Now, I will tell you what I think you ought to do. This is the advice I think you ought to give. We have used the terms multicounty, regional and substate to refer to an urban area. For my purpose, urban is cities and their commutersheds and nonurban is everything else.

The history of federal and state programs is largely non-urban. That is not news, but having entered this field in the mid-sixties when urban transportation planning was just beginning (at least in the formal sense under federal programs), I am continually struck by the history of the federal highway program and the state programs that arose in response to it. In essence, there was a complete lack of focus on urban concerns before the mid-sixties. The Federal Aid Interstate and Federal Aid Primary (FAP) systems, even in the sixties and seventies, were not intentionally urban. They were urban only because they penetrated urban areas to make connections. There was a belated addition of some urban spurs to the Interstate System, but it still was primarily a rural or nonurban system.

The other federal agency that has dealt directly with local transportation concerns, the Urban Mass Transportation Administration, came out of HUD, and has a history of direct dealing with cities; highway programs have never had such a history. My concern is that, although we don't know where the federal programs are going, it seems clear to me that something must be done for urban areas.

I am cautious about generalizing from my experience in North Carolina. Many of you know the peculiarities of North Carolina's relationship with local governments, as far as roads are concerned. But even given those peculiarities, it is safe to generalize that something must be done to help the urban areas in states, cities, and the communities that surround or are near them, the counties and the other towns and cities within the urban areas.

I see three general categories of groups who might provide that help: the federal government, the states and the locals themselves. My reaction is that if the feds and state government cannot (or will not) do it, that leaves it up to us at the local government level.

If the local governments are going to have the responsibility, then they must have the authority and the tools. The authority and the tools in too many instances are withheld by the states in what appears to many local governments to be an almost unholy alliance to deny local governments an opportunity to do something for themselves.

I do not know how to change this, there are hints that something may be emerging. This afternoon at the SCOPE meeting we will hear about a system of highways of national significance. That sounds to me like, in one sense, a federal divestment of responsibility and, in another, a reasonable and rational thing to do, to focus on something besides the huge and unwieldy FAP and FAUS systems, but something more than the Federal Aid Interstate System. It sounds like a good idea.

In North Carolina, there is a move to establish something called the intrastate system. I have heard references here, from other states, of corridors of strategic significance or strategic highways within the state or similar phrases, but what it sounds like (and what it is in North Carolina) is a definition of a system of roads, transportation corridors in some cases, at the state level that apparently is roughly parallel to the definition at the national level, of the system of national significance.

I regard what is about to happen in North Carolina as a partial divestment of responsibility. The intrastate system, like the Interstate System, is urban only to the extent that connections are made in urban areas. There is money for urban beltways, but not for urban arterials. Many state responsibilities in the urban areas are neglected, and if the cities do not get some help, there will be real problems, the end of some friendships and some political difficulties.

Looking at this more optimistically, I see that a better definition of the functional system may emerge, perhaps defined by responsibility, but nonetheless cataloging or categorizing highways according to their functional role. With a federal clarification of the functional system, we can hope for some clarification and specification of responsibility, and perhaps with it some authority.

My suggestion to you is to advise your legislators and executives to address urban transportation. We continue to evolve into an urban nation; the transportation problems are there, and you can lead elected officials to the inevitable political hay that will be made there.

A bit of perspective on statewide planning and, from the local government point of view, an appeal for a definition of role is critically important. Planners have complained for years that their plans do not get carried out, but planners never have been in the business of making decisions. They are in the business of giving advice. We need to give good advice and we have a real challenge as to what advice to give at the state level.

I have offered *you* some advice that I would like you to give to your legislators and your executives about giving a hand to the local governments. A less polite way to put it is the old cliché—if you can't lead, get the hell out of the way.

That pretty well summarizes what I think is the representative attitude of local governments.

### JIM CHARLIER

I thought I would preface my remarks with a few observations about Florida. You know the saying, "Where you stand depends on where you sit." Florida is a state with a strong commitment to planning. In other words, the state is managed through a comprehensive planning process that integrates planning at the state and local levels.

Florida is an urban state—nearly 80 percent of our population lives in our urban areas. It is also a high-growth state. Each year our population grows by over 300 thousand—an amount equal to a good-sized city like Tampa.

Rather than try to present a national perspective, I will approach the subject of transportation planning from a sun-belt perspective. What I say may sound familiar to those of you from other fast-growing urban states, and may offer a glimpse of the future to the rest. I will describe growth trends in Florida and briefly outline the major transportation trends. I will review Florida's growth management legislation, touch on political trends, and finally identify some of the major transportation planning issues facing us today and in the next few years.

Florida is often referred to as being on the cutting edge—we have begun to use the phrase "The Bleeding Edge." Our population has been growing at an annual rate of 3.1 percent so far this decade. Some 12.4 million people live in Florida today—this in a state that had fewer than 3 million people in 1950. Our net growth rate works out to about 900 people per day, primarily the result of in-migration exceeding out-migration. We believe that people will continue to come as long as the sunshine holds and the tanker captains leave our beaches alone. Conservative population projections indicate that 20 million people will live in Florida by the year 2020. Our automobile fleet is growing by over 250,000 cars per year. This is roughly equivalent to a string of cars 1,000 miles long coming across the Florida line each year, bumper-to-bumper.

The predominant pattern of growth in Florida has been suburban sprawl. Our growth has occurred not so much at the urban fringe as in rural areas near, but not necessarily adjacent to, our urban centers. Florida growth patterns reflect the national trend toward suburban office parks, urban villages, distinct major activity centers. These trends are driven by the fact that major land parcels for development are more easily assembled outside existing developed areas.

Another important factor is that employers are beginning to follow the population out to the suburbs. We are beginning to see office complexes spring up in places like Kendall, a large unincorporated subdivision west of Miami. Congestion and travel times are obviously important factors in locating building sites. As companies "shop for highway capacity" the effect can be to spread a thin veneer of development over the landscape. Of course, all of this is very much in line with what is happening in many other states.

Between 1980 and 1988, the population of our incorporated areas increased by 20 percent. At the same time, the population outside incorporated areas increased by 36 percent; some areas doubled or tripled during that 8-year period. In

1980, 80 percent of our population lived in urban areas; the figure was down to 78 percent 8 years later.

Fortunately, our central cities have remained strong. We have not seen too much of the inner city decay that has plagued midwestern and northeastern cities for so long. Our CBDs are not growing, however, and this has obvious implications for public transit, something I will come back to later.

Overall population densities are low in Florida. The statewide average is 222 persons per square mile. Our most dense urban county (Pinellas) has 3,000 persons per square mile. Data from the 1980 census show a mean census tract density of 4,781 persons per square mile in Ft. Lauderdale, compared with 3,704 in the Tampa Bay area, and 7,027 in Miami.

Florida reflects national trends in commuting patterns as well. Each year, 4 out of 5 new jobs created in Florida are in the suburbs. More than half of our commuting trips today are from suburb to suburb. Travel patterns are becoming more bidirectional. Peak hour directional splits of at least 45/55 are now the norm on most major routes, with the exception of some coastal access routes.

Florida's economy is healthy. Income levels are rising and job formation continues. Fortunately, our economy is also becoming increasingly diversified, which should help to shield it somewhat from short-term national fluctuations.

Interestingly, our greatest problem may be a shortage of qualified labor in certain sectors (service and manufacturing) and at certain locations, an obvious clue to future transportation needs. Almost 10 percent of nonfarm employment in Florida is in the construction sector. In some of our counties, 25 percent of personal income comes from this sector, which may help explain why we approach growth management issues with such caution.

I want to take a minute to describe our major transportation trends. The highway construction picture is changing rapidly. We may already have built much of our arterial highway system. Florida needs to spend \$200 million per year for routine maintenance of the state highway system. We need to resurface about 1,500 miles per year at a cost of \$100 million per year or more. We should spend at least \$75 million each year replacing and repairing existing bridges. As a result, the state is now building fewer than 100 lane miles of new highway capacity per year, and in some years much fewer. Yet demand on state highways is growing at a rate of 400 to 500 lane miles per year.

Florida's Interstate System is just now being completed. We do, however, have significant sections operating at or near capacity. For example, we need to spend \$1.5 billion on I-10 and I-95 along the east coast and on rural sections of I-75 between Orlando and Georgia, to say nothing of substantial capacity needs in Miami and Ft. Lauderdale.

We anticipate about \$100 to \$150 million per year in IR Interstate funds, including discretionary funds. This will be enough to keep up with Interstate resurfacing needs and to replace bridges as needed. However, Florida may need to look to state and local funding sources for a substantial part of its Interstate needs.

The primary funding mechanism for funding new alignment highway construction in the next few years will be the Florida turnpike. Florida has embarked on a major expansion of its turnpike system. The basic concept is to use the existing 320-mile system as a financial institution. In many urban areas we have potential tollroads that are only marginally bond feasi-

ble. That is, they cannot go to the bond market on the strength of anticipated toll revenues alone.

Nonetheless, the existing turnpike system today generates over \$100 million per year in revenues. And the bonds are paid off; there is no outstanding bonded indebtedness. Florida plans to use this revenue stream to leverage expansion of the turnpike into a statewide system of toll highways. Projects must meet rigid economic feasibility requirements. They must cover at least 50 percent of their own construction costs, and they must break even (covering debt service and operating and maintenance costs) within 15 years. We anticipate being able to build over 125 centerline miles of new expressways over the next 10 years through this leveraging of toll projects.

The program must be approved by the legislature this session, however, and it is encountering rough going. The legislators find it difficult to authorize a program that appears to take toll revenues collected from their constituents and spend the money building roads in another part of the state. Although this program would eventually benefit all parts of Florida, it can appear unappealing to certain parts of the state in the short term.

Most of you have read about Florida's high-speed rail project, so I will not go into great detail. It is an exciting program, however, and I should at least mention it. It is official state policy in Florida to have in place a high-speed rail system from Tampa to Orlando to Miami by 1995. In fact, that goal is written in statute. It is also state policy that no public funds will go into development of the system. The high speed rail commission is currently involved in a lengthy process of evaluating proposals submitted by consortiums made up of transportation firms, financial institutions, and development firms.

It is important to understand that the project could not stand on its own without public funding as a purely transportation project. It is the land development aspect, the exclusive rights to development at the stations, that will make the project go. Even so, we are watching to see if it will be possible for someone to put together a proposal that will work and meet the guidelines of the authorizing statute.

Florida is also taking the lead on developing magnetic levitation (Maglev) transportation in this country. This past year the state embarked on developing a magnetic levitation rail demonstration project in the Orlando area. The most likely route would link the Orlando Airport with the Disney complex. The Disney complex (Disneyworld, Epcot center, and the new MGM studios) have more than 25 million visitors each year. And the Orlando Airport handled 16.5 million passengers last year.

The project has given rise to a interesting debate locally. Those working with the project appear to feel that a direct link between the airport and Disney complex with no intermediate stops is the best configuration. After all, it is a distance of only 17 miles, which is barely enough to attain the speeds required to demonstrate the technology, much less make intermediate stops.

If the project succeeds, travel agents would offer a single combined air/rail rate to take you and your family from Sandusky or Des Moines along with your baggage directly to the hotel at Disney. Other tourist attractions and hotels in the Orlando area obviously are concerned about the exclusivity of such a proposal.

Downtown Orlando, to say nothing of developers in the northwest suburbs, has been interested in using some kind of

guideway transit system to enable the city to grow and stay vital in the face of increasing highway congestion. The coming of the Maglev is an enormous opportunity, but also presents difficult transportation planning issues.

As is true in most other states, Florida's public transit systems still carry a relatively small part of our daily travel. The state's systems carry a total of 140 million passengers each year. Our transit systems are carrying less than 5 percent of peak hour trips in every urban area except Dade County, where metrorail carries about 7 percent of peak hour trips. Of course, Florida is the home of metrorail, which a former president referred to as "metrofail." The fixed guideway transit issue is important in Florida and I will return to it in a minute. We also see a significant change in the role of public transit in Florida in the next decade, which I will treat later.

Florida's airports have been undergoing a phenomenal boom in recent years, owing partly to the weakness of the U.S. dollar, which is encouraging international tourism and keeping American tourists in Florida where they belong. Over 50 million people are passing through our airports each year.

Emplanements at Orlando increased 11 percent in 1988 alone. On the lower east coast, the central east coast, and in Jacksonville, serious consideration must soon be given to developing new airports to relieve congestion. Even so, capacity at airports may not be nearly the constraint that airspace congestion and ground access are.

As I said earlier, Florida is a state with a strong commitment to planning. The state's growth management statutes and rules are among the most far reaching and controversial attempts to control growth in the nation. The state's 1985 statutes established state goals and policies and put in place a comprehensive planning process that includes state land, water, and transportation plans. Also mandated were local government comprehensive plans. More than 450 local governments are preparing and submitting their local comprehensive plans over a 3-year period.

The primary issue now revolves around the concurrency concept. The term comes from a phrase in the 1985 legislation:

It is the intent of the legislature that public facilities and services needed to support development shall be available concurrent with the impacts of such development.

This phrase has given rise to the "M" word, moratorium. In other words, local governments that cannot assure that facilities will be available concurrent with growth might have to place moratoriums on further building permits.

As local plans have come in, the major issue has been state highways. Essentially, the issue shapes up like this: Are we going to (a) build additional transportation, (b) slow or halt growth, or (c) redefine the problem? This issue has been complicated by the fact that the governor and others are not at all convinced that the transportation planning process has led to either the right list of projects or an accurate assessment of needs.

Growth management is on the agenda again this session. Topics include urban sprawl, transportation, and a proposal to mandate urban service areas. It is interesting that the original 1985 act identified as a goal avoiding undue concentrations in our urban areas. Now we are considering language that would encourage greater urban concentration as a means of preserving natural resources, maintaining the viability of

our existing urbanized areas, and achieving "efficient development patterns."

I suppose that the conclusion to draw from this is that although Florida is a leader in efforts to plan for and manage growth, there is still considerable debate over what the end result should be.

It might be helpful to review some political trends that affect the transportation planning process in Florida. First, we must recognize that although the public is concerned about roads and transportation, these may not be the foremost public issue or need. Florida faces grave problems in the areas of crime and education. Moreover, Florida has not escaped the "read-my-lips-trend." Of course, this may not be too effective with some of our school children. They have enough trouble reading printed matter and have not yet progressed to reading the lips of elected leaders. The governor has made it clear that he will not only oppose, but will veto, any new taxes passed by the legislature, including taxes and user fees for transportation.

It is interesting to look back to just over 1 year ago. The governor and secretary of the Florida Department of Transportation flew around the state together to announce a new strategic transportation plan. This plan identified strategies targeted at solutions to what were then perceived as the problems facing Florida. The Department of Transportation was perceived as an inefficient bureaucracy that could not build at a rate that would meet the state's needs. The strategic plan identified reforms designed to achieve T/2—cutting in half the time required in the productive capacity of the department.

The strategic plan also listed 20 years worth of proposed transportation projects. Cost estimates were developed for the first 10 years of projects. The price tag came to \$40 billion, compared with anticipated revenues from all sources over that 10-year period of \$15 billion. In other words, the plan showed a shortfall of \$25 billion.

The strategic plan immediately caused considerable stir. The press reported on it widely and the Florida Transportation Commission issued an analysis of potential funding sources to close the gap. One of the commission's recommendations was that the state should issue fuel tax revenue bonds to buy rights-of-way for future highway construction. The legislature agreed and placed this on the ballot. On November 8, 1988, Florida's voters approved Amendment 4 to the Constitution authorizing the state to sell revenue bonds for right-of-way acquisition for state highways.

Yet as I stand here today, the strategic transportation plan is a dim memory. The governor has completely withdrawn his support for the plan, apparently owing primarily to his stand on taxes. Something has happened, however, that will have far-reaching implications in Florida.

There is more than a little doubt in the governor's mind about the validity of projects in the strategic plan. What would they do to our urban development patterns and to our neighborhoods? Would they encourage further urban sprawl? Are they the result of a good transportation planning process? Are MPO long-range needs plans little more than wish lists intended to compete for funding?

As much as anything, this attitude reflects a realization on the part of Florida's elected leaders that infrastructure investments—especially transportation investments—affect urban growth patterns. The professionals in our business have known that for years, but now it is on the political agenda in the capital.

Florida will develop a new strategic transportation plan, but it will have to thread the needle on some unresolved questions. With a 3 percent annual population growth rate and 4 percent to 5 percent annual growth in highway traffic; with 25 percent of our state highways already congested (55 percent in urban areas); with a population of "nimby's" who don't want "lulu's;" with a fragile and precious environment that we must protect; and with a public that will not support elected leaders who advocate increased public spending; just what should transportation planners be planning?

This leads me at last to a discussion of what I see as the transportation planning issues Florida will be wrestling with over the next 5 to 10 years.

It is interesting to note that in Florida, there is little concern with or discussion of movement of goods. We are concerned with movement of people. This may have to do with where we are on the growth curve. Peak periods on most urban highways in Florida are still relatively short. The percent of ADT occurring in the design hour (30th highest) ranges from about 7 percent to 8 percent in Dade County, up to as much as 20 percent in some of our smaller coastal communities. In other words, capacity still exists for truck movements in the off-peak periods.

The state is still young. It is growing rapidly and will continue to grow for many years. The opportunity still exists to shape our cities and our transportation system consciously and deliberately.

All good planners start by identifying goals and objectives. Let us say that the objectives we are working with would include the following:

- ensuring continued personal mobility and quality of life for Florida's residents
- ensuring continued economic vitality and development
- preserving our natural resources and fragile environment

In highway planning we need to reexamine how we measure capacity. Florida is a national leader in taking the 1985 highway capacity manual and the level-of-service concept beyond design to planning applications. We are using level of service to measure and report on the operating condition of our state highways and to provide standards for meeting the concurrency requirement I described earlier.

It is interesting, and this may surprise you, that our level-of-service standards, which are basically set at C in rural areas, D in urban areas, and E or lower in special circumstances, are criticized as being too high and as a restriction on growth.

Access management has become a major capacity issue in Florida. We simply cannot afford to buy out the access rights along our state highways. Yet the access permit is generally the last step in the development process. Florida passed significant new legislation last year that establishes a 3-year process for classifying state highways according to access criteria. An important part of that new process will be linking access permitting with local growth management through local agreements and in some cases a delegation of state authority.

Closely related to the overall access issue is interchange location and justification. This is no longer simply a question of design and safety. I am sure you know that in rapidly developing areas like most of Florida, funding for new interchanges is not the problem. Land owners and developers will fund the interchanges and be pleased to do it.

The issue, rather, is what is the purpose of the limited access highway? Is it to move local traffic or to provide for intercity, interregional mobility? And the issue concerns secondary development. The development pressures that follow the opening of a new interchange can easily overwhelm any local land planning process, even in Florida.

I believe that in the future, transportation planners need to look to opportunities to bring forward projects that have both transportation and environmental objectives. I do not mean mitigating the impacts of the project; I mean projects whose central purpose is a specific environmental objective. For example, Florida developed its I-75 project through the Everglades along Alligator Alley in a manner that will restore the sheet flow characteristics of the huge southern end of the Florida peninsula.

Future opportunities exist in Florida to use transportation improvements and funding to establish land bridges between the remaining contiguous areas of natural habitat for such large mammals as the black bear or other species.

As right-of-way costs continue to increase, as they will in the face of development pressure, we must find better ways to identify corridors. Acquisition is part of this, but only part. Certainly, we need to rethink whether federal funding provisions originally put in place to ensure proper planning and decision making actually have that effect in rapidly growing urban areas. We are working with FHWA on this, and have had excellent support and assistance from the division office in Florida and from Washington on developing a programmatic environmental planning process to help us preserve and acquire rights-of-way earlier.

Finally, highway planning at the state level may require a reassessment of the role of state government. In Florida, it is an appropriate role for the state to invest in the capacity needed to move people between cities and regions of the state and between Florida and other states. It probably cannot be the role of the state to be the primary investor in the capacity needed to move people from shopping center to shopping center. Ultimately, we may need to look at scaling back the state role to a more focused system of highways of state and regional significance.

Of particular importance to Florida in coming years will be the role of the public transit in shaping our urban areas. We believe, for many reasons, that achieving greater commercial and employment densities will be vital to Florida's future. My personal opinion is that we will not be able to do much about overall residential densities. The public will not support that kind of public policy. Public transit will not reduce congestion in Florida. However, it is the key to continued growth in our existing urban areas. Florida is focusing considerable public attention on the public transit issue now.

The Florida Transportation Commission has published a detailed look at the state's role in public transit. The governor's task force on urban growth patterns, in its interim report completed before the legislative session, identifies public transit as a key part of the state's strategy to contain suburban sprawl and meet personal mobility needs. Finally, new legislation, which appears headed for passage this session, will completely restructure the state's public transit assistance programs.

The most difficult public transit issue may be fixed guideways. We know that they are an essential part of our future, and projects are under development or consideration in Jacksonville, Tampa, St. Petersburg, Orlando, and Ft. Lauderdale.

dale. Of course, metrorail in Miami is our largest operational system. We also know that fixed guideway projects can be spectacularly unsuccessful. The per-trip operating cost on metrorail is \$12. Dade County spends over \$100 million in local tax revenues each year to operate its transit system, including metrorail.

How do you develop successful fixed guideway systems? Simple. Get control of public and private parking supplies (regionally). Keep politics out of location decision making. Do not build too much too soon. Use realistic cost and ridership projections. Put in place a dedicated source of local revenue for operations. Get control of development so that you can concentrate commercial development in a small number of activity centers, especially CBDs, associated with stations. Bring about greater residential densities in the system corridors. Sounds easy, right?

Another important transportation planning issue in Florida is our local government planning process and structure. We are working with a complicated local government structure. Counties, cities, county-wide planning agencies, MPOs, regional planning councils, local public transit providers, local expressway authorities, local airport authorities, and port authorities are all conducting transportation planning activities.

Consider airports and airport access. Metrorail does not go to the Miami International Airport. Another major international airport in Florida does not allow the local public transit vehicles onto its property. Airports in Florida are essentially successful profit centers. Taxi cabs and shuttle operators pay access fees. Rental car companies lease space. Automobile drivers pay parking fees. All of these are significant sources of revenue to the airport.

Or consider seaports, airports and ground access between the two. I saw an estimate recently of the number of people who are coming through the Ft. Lauderdale Airport each year bound for cruise ships a few miles away at Port Everglades. It works out to thousands daily. Are they all going to want to rent cars or take shuttles? I think not.

Another example is parking authorities and public transit. I know of three functions of municipal government that earn excess revenues: airports, utilities, and parking authorities. It may actually be easier to influence private parking supply in some of our cities than it is to influence public parking supply.

Of course, there is much discussion of regional organizations. Florida has had little success with this so far, however. Florida statutes authorize metropolitan transportation authorities, but none have been approved. The statutes also provide for regional transportation authorities, but only one has been created and it operates on less than a regional scale.

One thing is clear in Florida. We need to reexamine the role of our MPOs locally. We have top-notch, highly professional MPOs in Florida capable of sophisticated transportation planning. However, they are doing little in the way of public transit planning, and are under siege from the other local planning activities underway and are having increasing difficulty fulfilling their essential role in the process.

I wanted to touch on transportation systems management and transportation demand management, both of which are critical to our future success. I am running out of time, however, so I will close with one last observation. One of the special joys of public works is that everything you do is controversial; you read about yourself every morning in the newspapers. We have often wondered how the nation's media would handle the story if they learned that the world was going to come to a sudden end tomorrow—irrevocably, unalterably. We think that the headline in the *New York Times* might read:

World to End Tomorrow—Market Response Mixed as Investors Wait To See Reaction In Tokyo.

Finally, our own Tampa Tribune would run this headline:

World To End Tomorrow—State Lawmakers Cite Florida DOT for Unexplained Delay.