

Chapter 3

Challenge for Statewide Transportation Planning for the 21st Century

There were a number of keynote presentations made during the conference that present a broad overview of the primary issues to be addressed in the 21st century. The first perspective comes from the sponsoring committee for this conference, the TRB Committee on Statewide Multimodal Transportation Planning. Each TRB committee was asked to prepare a short paper on the current state of the practice and a look forward to future issues in the area of interest to each committee. The paper presented by Neil Pedersen, chair of the committee, represents the views of the practitioners in this field and was prepared based on a series of peer reviews sponsored by the committee.

The second perspective comes from Gloria Jeff, Deputy Administrator for FHWA. Jeff presents her Top 10 issues for statewide planning for the next century. Her perspective is a personal reflection based on years of working at the state level and, now, for the recent years viewing transportation from the broad federal level.

The third perspective comes from a source not normally included in statewide transportation discussions, the Federal Maritime Commission (FMC). Clyde J. Hart, Administrator of FMC, presents some challenges to the state planning community regarding the consideration of maritime issues in statewide planning.

The final perspective comes from three chief executive officers of state DOTs: Alaska, Pennsylvania, and Washington. In an informal panel discussion format the three executives comment on several statewide planning issues from their states' viewpoint.

Following all the keynote presentations, there was an opportunity for the speakers to engage the audience in a discussion of their presentations. A summary of that discussion is also presented at the end of this chapter.

NEIL PEDERSEN, *Chair, Committee on Statewide Multimodal Transportation Planning and Maryland State Highway Administration*

TRB's Committee on Statewide Multimodal Transportation Planning is pleased to provide a review of the current state of the practice and a look forward to future issues in the field of statewide multimodal transportation planning. The state-of-the-practice information and future issues have been compiled through a series of peer reviews sponsored by the committee and were the focus of a committee-sponsored conference on statewide transportation planning held in July 1999.

State of the Practice

As a result of requirements contained in the ISTEA and pursuant regulations regarding statewide planning, all states have now developed and are maintaining statewide transportation planning processes. Statewide transportation planning requirements were

retained, but revised, in the TEA-21. New statewide planning regulations have not yet been issued; however, the expected effect of the changes brought about by TEA-21 will be to provide more flexibility for individual states to do planning that focuses on the most significant issues within each state.

The statewide planning processes that have evolved since the passage of ISTEA have been as varied as the states are diverse. The critical issues that are dealt with and the means by which these issues are identified and analyzed vary significantly from state to state. This variation is driven by such factors as statutory and institutional responsibilities for delivery of transportation services, size of state, degree of urbanization, growth rates, amount of through passenger and goods movements, state involvement in growth management, current levels of multimodalism and intermodalism, technical capabilities, and the role of planning within the state department of transportation (particularly with regard to programming decisions).

Although all states have produced statewide plans pursuant to the requirements of ISTEA, perhaps more significant has been the development of ongoing statewide planning processes. Since the first round of post-ISTEA plans were developed, most states have evolved from a focus on producing a plan (in the form of a document) to producing a continuing statewide transportation planning process. What also has occurred in many states is that this process has been directly tied into other key planning-related processes such as the development of vision plans, strategic plans, business plans, STIPs, management systems (asset, congestion, intermodal, and others), growth management plans, air quality plans, and environmental resource plans. Statewide transportation planning processes have also become better coordinated and integrated with planning conducted at the metropolitan, regional, or multistate levels,

The state of the practice of statewide multimodal planning is evolving as the issues that are being focused on change. There is far less focus on facility planning than in the past. Attention now is being placed on policy issues, system management and preservation, system operations, system performance, determining customer needs and issues, financing and fiscal constraint issues, and transportation's role in the context of broader societal goals such as the economy, efficiency, equity, the environment, and livability.

Current and Future Issues

Looking forward to the new millennium, there are a number of key issues that will be faced by practitioners and researchers in the field of statewide multimodal planning. Several of these issues are discussed in this portion of the paper.

Performance-Based Planning

Governors, legislators, and the public are increasingly holding transportation agencies accountable for measuring system and agency performance. Statewide transportation planners are expected to develop goals that are measurable and to report on progress in meeting these goals. The focus has shifted from measuring output to measuring outcomes and from measuring performance of a single mode to performance of the entire transportation system. Measuring progress toward goals that are not directly tied to the transportation system but are influenced by the transportation system is also sometimes

expected. Although simple in concept, implementing performance-based planning has proven to be more difficult than might have been expected. A major challenge involves developing objective, nonmode specific measures for which data are readily and regularly available. Questions have been raised regarding the appropriateness of developing performance measures, and particularly performance standards, for goals over which a transportation agency has little or no control. Performance-based planning and measurement in statewide multimodal planning will be a major issue for a number of years to come, particularly regarding the degree to which performance measurement and tradeoff analysis can be used to guide agency investment decisions.

Customer-Based Planning/Partnerships

A related issue is the role of the customer in statewide multimodal planning. In many states customers no longer merely provide comments to plans developed by transportation professionals but are actively involved in identifying and analyzing issues and in the development of the plan itself. This has changed the methods that are used for involving the public, the nature of the issues that are identified, and the tools that are necessary for analyzing and presenting the results of planning analyses, as well as the transportation solutions. Planners are being challenged to ensure that all interests are fairly involved in the planning process, particularly minority and low-income populations that have historically been underrepresented in the process. Successfully addressing identified transportation needs in the future will require partnerships, many of which will be developed during the planning process. The ability to work together with diverse partners, to reach consensus on contentious and complicated issues, to arrive at win/win solutions, and to find solutions that do not compromise long-term objectives of any group will become critical to progress on virtually every front.

Management and Operations

In the post-ISTEA era, a major shift in focus occurred at both the federal and state level from one of planning and building the transportation system to a greater emphasis on managing, operating, maintaining, and preserving the built system. Planning's role in this shift varies considerably from state to state and is evolving. As asset-management systems evolve and become a more powerful tool, they can serve a valuable database and analysis role for statewide planners. The potential for congestion and intermodal management systems to serve as tools in statewide planning has been largely unrealized. As ITS technology has evolved, it has become more critical that decisions regarding deployment of the technology be made in the context of statewide and metropolitan plans. More still needs to be understood about the benefits and costs of these systems and how these trade off against alternative transportation investments. Planning will need to evolve from a focus primarily on long-term needs and facility investments to one that also looks at current operating needs and assesses tradeoffs between these immediate needs and long-term needs.

Relationship Between Planning and Programming

ISTEA for the first time required that long-range plans developed in metropolitan areas

be financially constrained. Although this same requirement was not imposed on statewide plans, financial planning and financial management have become important considerations in statewide planning processes throughout the United States. Taking financial and programming considerations into account in planning has introduced more of a sense of reality of what can actually be accomplished during the life of a plan and in a number of instances has successfully focused planning discussions on needed revenues. It also has resulted in more of a focus on innovative financing alternatives to address long-term needs identified in the statewide planning process. Although a direct link between the plan and the STIP is becoming the rule rather than the exception, it is still not universally the case. A concern is that financial constraint not become a reason not to do visionary planning or to develop the case to raise the revenues needed to address transportation needs. As statewide financial planning and the link between planning and programming evolve over time, it will be important that best practices and lessons learned be shared.

Multimodal and Intermodal Planning

The intent of both ISTEA and TEA-21 was that the federal government, as well as states and metropolitan areas, level the playing field among modes, develop the best solution to address transportation needs without a modal bias, and use the full range of multimodal and intermodal solutions available to address identified needs. Due to massive unfunded needs that had accumulated during the years leading up to ISTEA, the length of time required to develop transportation projects and paradigms within the profession that were sometimes hard to break, planning during much of the 1990s focused on playing catch up with previously identified needs and projects. This was done instead of taking a fresh look at identifying whether there might be a different way to solve the problems. Although multimodal and intermodal planning are not new concepts, analysis tools and performance measures that allow for mode-neutral and multimodal evaluations are still woefully inadequate. Planning still largely takes place at a modal level, with statewide plans often being a compilation of modal plans rather than a series of multimodal and intermodal solutions to identified needs. This is partly due to fragmented responsibility among different agencies for planning, programming, design, implementation, and operations at the modal level. State DOTs find it difficult to do planning for and get the ownership in recommendations for modes not under their control. Successful examples of multimodal and intermodal planning processes need to be documented and evaluated, including how institutional issues are successfully addressed.

Technical tools that will allow mode-neutral and multimodal evaluations need to be further developed.

Goods Movement Planning

Since the passage of ISTEA, goods movement planning has received much more attention in the statewide planning process. Better data has become available through Bureau of Transportation Statistics (BTS) and other databases. More staff resources have been devoted to goods movement planning. Freight forecasting models have been developed in a number of states. Access to major intermodal transfer facilities such as airports, ports, and rail terminals has been a focus of many statewide planning efforts,

particularly in light of the focus on National Highway System (NHS) intermodal connectors. However, significant changes are occurring in underlying economic phenomena affecting goods movement such as the globalization of the economy, free trade, just-in-time delivery, and tremendous increases in high-value, low-weight freight. At the same time, major changes are occurring in the freight transport industry such as the consolidation of the port business into a limited number of superports that will serve substantially larger ships, the merger of railroads, and increasing percentages of goods being transported by container that have dramatic implications for freight demands. These will all affect statewide planning in ways that are not fully understood at this time. States continue to grapple with what the appropriate role of state government is in transportation services primarily provided by the private sector. All states will confront challenges in trying to develop public-private partnerships in goods movement that will optimize economic efficiency. Capacity constraints in the goods movement system can be expected to become major issues in statewide planning as changes in demand occur. Further research into the implications of these changes is needed to enable us to better accommodate future goods movement requirements. Additional documentation on the best practices regarding institutional arrangements that best support freight interests needs to be developed.

Technology

Rapid changes in technology will change statewide transportation planning over the next few decades in ways that we can only imagine. Technology will make data and information available that have not been previously available to the transportation planning process. Our ability to store, process, and analyze data and information will revolutionize our ability to answer questions that previously went unanswered or were answered subjectively. Technology will change the nature of trips made (and not made). Through advances in telecommunications and more prevalent use of telecommuting, teleconferencing, and teleretailing, trips that are made today will not be made in the future. Technology will be used to better manage the system through more extensive use of ITS. Technology will also reduce some of the costs and impacts of transportation through improved emissions technology, more fuel-efficient vehicles, and safer vehicles. The effects of these changes on statewide transportation systems is not understood. Statewide planning processes need to become better equipped to address the effects of these changes, both for the near and long term.

Environment/Sustainability

Historically, consideration of direct and indirect environmental impacts of statewide transportation plans has been superficial at best and often nonexistent. In-depth environmental impact analyses usually have been left to the project development process. In the future more focus will be placed on secondary and cumulative impacts of transportation decisions made at the system level, including the effects on land-use patterns and larger-scale environmental systems such as watersheds. Sustainability issues will become a more important factor in decisions made regarding the transportation system, and they will have to be considered in the statewide planning process. Only a small number of states currently have state-level growth-management legislation;

however, as sprawl continues to cause travel growth that far exceeds population growth, the relationship between land use and transportation will become a larger issue in statewide planning. We need to learn lessons from those states that have begun to consider these issues and develop new and better methods to analyze the secondary and cumulative impacts of statewide transportation decisions. Debates between those who believe transportation capacity should be provided to respond to demand and those who believe that transportation should be used as a tool of social, environmental, and land-use policy will continue as a central issue in statewide planning for years to come.

Equity

Related to increased consideration of impacts on natural environmental systems is the consideration of the distribution of impacts and benefits of transportation decisions and investments on various human populations. Environmental justice has become a central issue in project-level decision making but has not yet become a central issue in many statewide planning efforts. The distribution of impacts of statewide transportation decisions on minority and low-income populations will become an increasingly important consideration, as will an assessment of the equitable distribution of benefits of statewide transportation investment decisions. Welfare-to-work and access-to-jobs issues will need to be assessed at the statewide level as well as the metropolitan level, especially in light of more limited mobility choices for low-income workers in rural areas. A number of states are focusing on the issue of equitable distribution of investments between rural and urban areas and the role of rural elected officials in transportation investment decision making. There will be a need for sharing lessons learned regarding these issues, as well as developing effective tools for quantifying the effects of policy decisions.

Relationship to Other Transportation Planning Processes

Statewide transportation planning is not done in isolation but must be coordinated with a number of other transportation and nontransportation planning processes. Increasingly, collaboration is required with ongoing local jurisdiction, metropolitan, regional, substate, tribal nation, and multistate transportation planning processes. These planning efforts can be effective only if they develop mechanisms to reach consensus among the various processes; otherwise, policy gridlock may occur and plans will not be implemented. Some states have moved to more of a regional planning and programming perspective in an effort to better link statewide with metropolitan and local planning. Given the different interests and goals of officials at each level of transportation planning, successful methods of collaboration and consensus building need to be shared and documented.

Technical Issues

As the policy issues that are being addressed by the statewide transportation planning process have changed, the technical tools for addressing these issues have not kept up. Research budgets for U.S. DOT were dramatically reduced under TEA-21. In the travel forecasting area, the focus for model improvements has primarily been at the metropolitan level. At a recent committee-sponsored conference on statewide travel forecasting, a number of technical issues and research needs were identified. Some of the

areas of future focus are the effective use of national and ITS databases and filling in critical data gaps in these databases, developing models that can truly perform analyses of multimodal alternatives and multimodal investment strategies, better serving performance-based planning efforts, coordinating statewide and regional analysis methods, analyzing modes that do not yet exist in a state (such as maglev or high-speed rail), better understanding of underlying changes occurring in the economy and the goods movement industry, and developing simplified policy-oriented analysis tools. In addition to demand forecasting issues, a number of the other issues identified earlier in this paper require new and improved analysis methods, particularly in the area of operations/management planning. Advances in geographic information systems, graphical user interface technologies, 3-D visualization, global positioning systems, data warehousing, and remote sensing provide tremendous opportunities for more effectively analyzing and displaying the results of statewide planning efforts. A commitment and focus is needed on developing, documenting, and training professional staffs in these methods.

Process Reengineering

As the issues that are being addressed by the statewide transportation planning process change and the role of statewide planning within state DOTs evolve, a number of states have recognized that they need to reengineer their statewide transportation planning process. Given the magnitude and rapid rate of change that is occurring in statewide planning, reengineering efforts are likely to increase. Lessons learned from these efforts need to be shared so each state is not reinventing the wheel as it undertakes process-reengineering efforts in statewide planning.

Staffing Issues

At the same time that the issues in statewide transportation planning have become more complex and the tools to analyze these issues require greater and more varied technical competencies, most state DOTs have decreased staff sizes, and many experienced professionals in the field have retired. The discipline of statewide transportation planning requires staff that possesses a broad background in a number of areas and at the same time greater levels of technical capability than in the past. A major challenge will be to recruit, train, develop, and retain qualified professional staff, particularly within state DOTs.

GLORIA JEFF, Deputy Administrator, FHWA

I am now taking off my official hat associated with the FHWA. Several months ago, Neil and I had a conversation about statewide transportation planning. We had conversations about what the committee was doing. We had conversations about where we felt our respective careers in transportation would take us and what the environment would be in which we would work, and he suggested that maybe I would like to share some of my thoughts and ideas with the rest of the group.

He also reminded me that the last time there was a statewide transportation planning conference, it was in Coeur d'Alene, Idaho, and they asked me to do that there as well. Well, I agreed to do it with the following disclaimer: that the opinions represented here are mine as a private citizen.

It is very clear that they need to be recognized as such. They are not the official position of the secretary of transportation or the FHWA or their respective organizations. I say this so there is no confusion about the radical, provocative, and extraordinary positions that are forthcoming so that if you are unhappy, you can yell at me. You can't yell at the agencies, nor can you suggest that the federal government is usurping the responsibilities of good and rational human beings at all levels.

There is always this controversy about what is multimodal, what is intermodal. For this presentation, I have based my definition of multimodal transportation planning to be one that is system based, that focuses on activities within the transportation system, a system that is charged with moving people, goods, and, most critically, information. And it does so among an integrated set of modal networks that recognize the political boundaries of states and recognize that the political boundaries are simply those defined by man. There are others, some more rational ones, that have to do with the business environment.

So, what has been happening? In the 20th century, we have had a transportation system that was infrastructure based. The initial charge was to get the farmer out of the mud; and after we got the farmer out of the mud, we said it would be nice if we connected the places where things were produced with the places that people live and consume. So, we got about the business of doing that. Statewide planning has been focused on identification of needs. It has been focused on the context of needing to identify what the condition of the roadway system was; what we needed to do in order to construct the interstate highway system.

And then every now and then, in addition to looking at what the needs were with respect to highway roads and streets, statewide planning puts together plans that are focused on obtaining funding from either the federal government. But, in many cases, from the state and local units of government for the construction of highways, roads, and streets and some additional attention in the latter years of this century to public transportation and other modes as well, including railroads and trucking.

It has also been primarily focused around the idea of project scheduling. What do we need to do to get together a program of projects that can be completed in a particular time frame in support of our function associated with construction?

Vehicle movement was the dominant driver and in many cases, no pun intended, we were looking at how many vehicles can we move, not necessarily with the idea that there were some other things that needed to be done. We have begun to evolve beyond these actions, and I will talk about that as I talk about where I think transportation planning is going in the 21st century.

There was an institutional structure within which statewide planning took place. The fundamental assumption was we do construction; therefore, our planning process has to focus on what is it that we construct and not necessarily on some of the other functions that take place.

We dealt with environmental compliance but primarily from the standpoint of what it had to do with us getting projects approved. We interacted with metropolitan areas, not in the context of what those cities would look like, but in the context of what

was it that they needed to get a project completed in that community or for us to a project completed to serve a state system function.

Goods movement was dealt with the fundamental philosophy of freight doesn't vote. And when attention was given to this whole question of how we dealt with freight and goods movement, it was in terms of what were the commercial volumes on highways, roads, and streets and how should these volumes be accommodated. Fundamentally we believed that our function was to define a system that the users would figure out the most efficient and effective way to use and operate. We have begun to evolve beyond that as we move toward the 21st century.

What are the challenges for the 21st century? Well, I think there are 10.

Number 10: Planning will be multimodal and intermodal. It will focus not only on the idea that we need to look at multiple modes by which we achieve the mission of moving people, goods, and information, but also that when we begin to compare the ways within which we do it there are opportunities to look not at just a single mode versus one, but in all candor, looking at a combination of modes in various configurations against other combinations of modes and satisfying the need to move goods and people for a system that is inclusive, integrated, and, for that matter, international in its scope.

Number 9: "This is not your father's state DOT." The reality is that the state DOTs that successfully constructed highways, roads, and streets in the 20th century will not be the transportation departments that we will see in the 21st century.

Steve Lockwood has done an extraordinary job of looking at what the states said that their future structure would look like. In the AASHTO survey, they talk about being smaller, having a set of core capabilities that are housed within it. Activity will be regionally focused, focused on interdependent actions beyond their state boundaries. State DOTs viewed their purpose to be a strategic approach to providing a transportation system that is first and foremost safe, that will be reliable, that will be customer inclusive, that is, supporting of positive economic activity.

The vision is one that forecasts a different kind of transportation organization in which the production functions would be outsourced. Many of the organizational functions that were held as a fundamental part of state DOTs in the 20th century will be outsourced. A changing environment in which more design-build, consultant-utilized and, expert system-based activities will be the core of state institutions. This will not be our fathers' state DOT.

The planning function will undergo as significant a change in what it has to do in a 21st-century state DOT as the DOT itself does.

It means that the function of project scheduling will be one function but that the planning process will not simply be confined to preconstruction activities; that it will be looking beyond this traditional scope. The approach will be characterized by increased use of commercial products and services and increased partnerships with the private sector. The environment will be one in which the "transportation companies" will be just that, cross-industry companies that provide highway, maritime, railroad, and trucking services that address planning, financing, and an array of activities that deliver transportation systems in a new way.

Program and project delivery in terms of the actual construction-related activities will move from the institutions called state DOTs and the maintenance activities that are done by many state DOTs today will move away. In that context, the role of planning will not be how does a schedule of projects get done? The planning mission will reflect the

fact that state DOTs have moved from a construction framework to an operational framework.

Within that operational framework, the question will change from what does the agency construct to what are the roles, the functions, and responsibilities of the transportation system, and how does the agency contribute to operation of the system.

Number 8: Planning will be outcome driven. Performance will be gauged not by determining did the project get constructed but the measures will be what resulted from the program or project.

Planning activities will work within a framework in which there will be an establishment of a vision, view transportation from a comprehensive context of what is it the state wishes to accomplish; how that translates into individual activities within metropolitan and rural areas. After that vision has been established, a plan will be developed.

After the plan is developed, an assessment will be made to prioritize the actions that will be taken, and then, following that, another assessment will be done within the planning process that determines whether or not the outcomes—not simply the construction—but that the outcomes have been achieved.

In this framework, performance measurements will be a critical element, but the performance measures will not only look at what happens at the project delivery level, but also at what happens at the system level. What is it that we hope to get out of the system and was it achieved?

The performance measures will be outcome oriented. They will be relevant to customers and stakeholders. We all know that the profession has traditionally a set of performance measures that related to us as transportation providers. We have looked at the question of how many roads have we moved into good or fair condition? How much additional volume capacity has the system provided? Was the opportunity to improve the safety at rail grade crossings achieved? Were safe distance deficiencies resolved?

We have looked at those, but the question has become what did these measures tell our customers and how did it advance the case for transportation investment? We all know the difficulty that we have in acquiring additional funds within any environment, whether it is the federal or the state or local government level of convincing customers that what we do is important enough to receive more of their income.

They notice us when we don't work, not when we do, so the performance measures have to be relevant to the customers and stakeholders. The measures must communicate achievement and advancement to the stakeholders. Communication with stakeholders and those impacted by program actions is increasingly a part of the statewide transportation planning process. We will be communicating not only with our fellow practitioners, but with the customers, the stakeholders and those who are impacted by the transportation system.

Performance measures will have to reflect how well the system operates. In other words, what is it doing for the industrial sectors within the state? What is it doing to enhance the economic standing of that particular state and its businesses? What is it doing to improve the quality of life by raising wages, by providing greater opportunity and flexibility to the people and the businesses who work there?

Those become critical elements in talking about how well the system operates. Consideration should include how does it connect? Do we construct a new roadway that opens up not only new opportunities for auto and truck movement but in so doing,

provides greater opportunity for industry to move particular products creating a new opportunity for a port or a new opportunity for an airport to operate with greater volume of activity and how does the timing of these improvements coordinate.

Number 7: Partnerships. Partnerships will be a way of life, a way of doing business. They will build upon three basic principles: first and foremost, that partnerships will be built upon the strengths of those involved in the partnership, not the weaknesses, not the ability to complement, but the strengths of the individual partners.

Second, a shared vision of what is to be accomplished among those partners.

Finally, there has to be agreement on what the roles of the respective partners are within that partnership activity.

The partnership formations that we will see will be different. We will have, of course, the traditional all-government-level partnerships where you have not just the state and the federal DOT working together but also local units of government. But you will also have partnerships that involve all level of government and across governments. For example, as we look at the question of environmental streamlining, partnerships with resource protection agencies will be formed.

We look at partnerships where FMC and FHWA work together on the maritime transportation system.

There will be partnerships between government and transportation providers in the private sector. There will be partnerships that will involve government, the customers as a collaborator, as a partner in the process, supplier and stakeholders; a very different set of partnerships than we saw in the majority of the 20th century.

We are beginning to evolve into those as we end this century, but when we look at the 21st century, it will be the standard way we do business.

Number 6: Technology. Technology will be not only our aid in terms of how to move volumes of people quicker, faster, and easier, but from a planning standpoint, it will also give us the new set of tools that we need for new-age decision making. It will let us do planning within a dynamic environment in which we are looking at radical changes in how goods are moved and a very quick decision about when and how goods are moved. Also the concept of dynamic land use will be included.

It is not like the good old days. You build the plant. The plant stayed there for 30 years and it constantly had products coming in. It did not move after 5 years. It is now a question of where do I need to be this year? Where can I get a better tax abatement in 5 years? And how do I move on? Those decisions get made without necessarily saying, you know, the transportation is ready for that change or that we need to loop them into our decision process.

So, part of our challenge is going to be to get into that process, utilize technology, our understanding of logistics, of business decision making, so that we not only look at how the individual components operate but how the system as a whole is going to respond to that kind of a dynamic environment. We are going to have to have tools that let us do an economics-based assessment.

Planners have talked about how are we going to be able to demonstrate what transportation does for the economy. The technology that lets us do that has yet to be developed and will need to be developed for statewide planning in the 21st century.

Techniques that help us better manage this asset called the transportation system, particularly at the statewide level, will become yet another element in which technology will be our aid.

Number 5: The sphere of influence will expand. Most of you are thinking if it gets any bigger, I don't want to be on it. No, it is not like a piece of bubble gum that keeps expanding and expanding and expanding until it explodes; but, the sphere of influence for transportation will expand again in the 21st century.

Again, as state DOTs move from their tradition of being construction companies to being operationally based companies that are small, compact, that are outsourcing as much as possible, that are maintaining just a core set of capabilities, core capabilities will focus on policy, service delivery, on customers' changing expectations. Transportation's sphere of influence will be not simply how do we move vehicles either on the surface, on the water or in the air, how much funding we provide or how much technical assistance is available; our challenge will be how do we deal with stakeholders.

Who are they? Is it simply the airport owners and those businesses and households immediately adjacent to it? What are the economic opportunities in the community created by an expansion of the freight-carrying capacity of that airport? What is the economic impact of expanding an airport? Is it simply we have the land, so we do it? Or is there more to it than that?

How are we expanding the opportunities for customers, not only in terms of how they move from point A to point B, but what quality of life they have, what lifestyle they choose and, in all candor, how, where, and when they spend their monies? What business entities are attracted to or depart from your particular states because of the availability of transportation? Do we help facilitate or mediate local decisions?

Number 4: Changing skills. The skills needed for success within statewide transportation planning will change. We started out this century with statewide transportation planners being engineers.

We have moved to a decision and funding environment in which engineers, economists, planners, statisticians, and environmentalists are those who drive many aspects of transportation planning processes. As we look to the 21st century, we are going to need individuals who are not only knowledgeable in those areas, because we will continue to do some of those functions and rely upon their expertise, but we are going to be looking for individuals who understand logistics and understand that within the context of how business makes decisions. Also folks who consider decisions in a systems context not merely individual projects.

We are going to need to look at new and different financial tools. It is no longer going to be the good old days of the planning process to figure out how to get the state legislature or the federal government to give it more money, but now it is how to leverage those dollars. What drives the marketplace?

We will find that where the real strategic management function needs to be within a state DOT of the future is going to be within the planning process, and it is strategic management, not strategic planning. There is a substantial difference and planners will need to learn how to be involved in the strategic management process.

They will have to be better at collaboration than they have been. I have already talked about one of the Top 10 items being partnerships. Indeed, the ability to work in a collaborative environment—not an environment that says we know what is good for you and our job is to convince you that we are right—and to talk about how we collaborate and recognize that there are times when the customer not only is our customer whom we have to figure out how to make happy, but also as part of helping us design the solution.

We also will have to learn how to be as much of an advocate for the planning processes as we have in the past and that we have to learn how to be advocates and at the same time achieve the consensus to get the work done.

Finally, we are going to have to learn how to manage in a very different environment when we talk about contractual relationships. Technology is going to require us to manage differently. It used to be we could say we need a contract and we want the contractor to achieve a project and here is the process by which he or she does that. We now can say this is the outcome we want, but the process by which you get there is still one that has to be developed, that becomes part of the contractual work that has to be accomplished.

We are going to have to learn how to manage contracts in a very different environment where the process that has to be followed is not known, but we as transportation professionals are going to have to find ways to do that.

Number 3: Transportation planning at the statewide level is more than a preconstruction activity. It is something that we have done for a very long time at that level. It was what do we do to get the project ready to go out the door. That is when the planning process ended. Many conflicts within state DOTs have been fought about where is the line between planning and programming, programming and scheduling, and “we ain’t got no role once it is done, other than report on the condition of the roadway.”

There is no communication on how well the system is performing or recognition of performance as a planning activity. Yet, these questions will need answers in the 21st century. Going back to that communication issue, going back to having performance measures that are relevant to the customers, going to the focus being on the system level, then those who do planning are going to have to be good communicators. They are going to have to be the folks who come into public meetings and say, you know, our agency did this and not only did we promise you that we would accomplish these sets of objectives, which we have done. It has not been achieved by serendipity, but because we actually knew what we were doing. This is why it is relevant to you and why you need to support it as part of your ongoing activities.

Number 2: Planning will be involved in politics. It is a conscious decision to have politics be small p and not big P, partisan politics, because it won’t be. The reality is that the planning that is done at a statewide level will have to provide the leadership to decision makers and opinion makers on the relevancy of transportation, and provide an appreciation of the breadth of the sphere of influence that transportation has so that when decisions are made, transportation’s essential importance is recognized.

It is not simply enough to say let’s put some money in maintenance because everybody screams when we don’t fix the pothole; it is more than that. It is being able to make the case that transportation has a real impact on the economy. It has in terms of jobs, the retention, and the attraction of new economic sectors on the diversity and success of the economy. The one thing we keep hearing from economic types is that in the future a diverse economic environment is critical for viability.

Planners are going to have to make that case to the political decision makers and the opinion makers within the state. They are going to have to make the case for why it is a priority in line with education, in line with law enforcement and health insurance. We are going to have to make the case.

Then at the top of the list the one thing that absolutely has to be recognized when one talks about statewide planning in the 21st century is that a successful statewide

transportation planning activity will be determined by the leadership in leading change. It is not simply going to be did you get my program of projects delivered, but have you successfully led the charge for change in your organizations, from construction to operations, from a focus of you do whatever you are told to do to a strategy for how successfully you lead change?

So, indeed, that is your measure of success: Did you lead change?

In closing, all I want to leave you with is the thought that statewide multimodal transportation planning in the 21st century will be system based. It will be interconnected with business and social delivery systems. It will utilize a flexible process, one in which practitioners must be diverse in terms of their skills, in terms of their background, in terms of their philosophy about what it is that transportation is supposed to accomplish.

But first and foremost, it will be successful because it will be a leader in change.

CLYDE J. HART, Administrator, Federal Maritime Commission

What you will hear from me echoes what Gloria just said. And here is why. There are forces at work in transportation that you and I can do nothing about. They are going to happen and all we can do is sit there and plan for them, and plan we must because they are immense forces. I will just name two. I have got a long list of them, but two that I want to talk about. The first is globalization.

What is globalization? Globalization of the economy simply means that we are becoming one economy worldwide whether we like to or not. Here are a couple of manifestations of it. Production worldwide is generally moving south and west. So, it is now moving into the Indian subcontinent. Here is a fact you might not know and I didn't know until recently with my reading Thomas Friedman's book, *The Lexus and the Olive Tree*, which is about globalization.

The back order department for Swiss Air Airlines is where? India. And, of course, why not? You have a computer. You have a modem. You have lower-wage-scale people there.

It is the same with production. We are getting Nike shoes from China. We are getting grapes from Chile. We are getting leather shoes from Brazil. And the list goes on and on. It is all about globalization. It is changing the way we live and it is certainly changing transportation.

Transportation, as Gloria said, used to be seen as a breed apart. Now companies are getting into logistics because the fact is Nike does not care, Phil Knight sitting up in Oregon does not really care, who gets his Air Jordans to Fleet Feet shoes, just that they are there the day before the big sale and not the day after. This leads to partnerships, which is why you have global transportation companies and logistics companies because the deal is to get goods from point A to point B in time for your customers to use them and there are no points for second place.

To tell Nike we could have had your shoes there but we just had a little problem with one of our ships is just to ensure that Nike won't use you the next time. So, you need partnerships. Partnerships, and this should be obvious, extend to all levels of government, all levels of funding.

Transportation is not seen as just one part of the solution or one part of the piece of the puzzle. It is the solution. What we are also talking about is constant measurements.

The measurement is what works for the customer and will you get a second chance out of it if you don't do it the first time.

What all this has to do with you and planning is that it starts with planning and it has to start now. A couple of reasons why: By the year 2020, trade will either double or triple, depending on whom you ask. Ninety-five percent of what comes to the shores of the United States comes by ship. Getting to the ports is just the start of the problem. You can have ships lined up in a row from here to Asia, but if I have one road in and one road out of a port, Nike will not get the shoes to Fleet Feet on time.

So, we are talking about intermodalism because on the other side of that ocean is either a rail connection or a truck connection. If there isn't, there should be. When you plan for a port, you have to plan for the rail and the motor connections on the other side of that port to be effective, to get the job done.

For that, modes need to talk to each other, FHWA and FMC, FTA and FHWA, and Coast Guard. We have to talk to each other. The idea is not to solve issues. The idea is to solve problems.

For too long in the past, all of the modes—and I dare say a lot of statewide planning organizations—were in their own little boxes. The road guys were over here talking about concrete; the maritime guys were over here talking about 20-foot equivalent units (TEU) and never the twain shall meet. That can't be allowed to continue.

It is the same with funding. One of the things we have managed to do is to talk to each other about funding. We have different funding streams. It is not our fault. Congressional legislation decrees this and we just have to live with it. It is just the way it is. If you are going to be critical of that, you might as well be critical of the fact that it didn't rain today or it might rain tomorrow.

But what we can and must do is solve transportation problems. For example, What is the objective? The objective in one case is a ferry for the Alaska Marine Highway System. There are two pots of money, one from the FTA and one from FHWA. The idea is partnerships. The idea is everybody has to talk to each other to use the available resources, and that includes the funding streams.

My second favorite story about transportation is that 37 years ago, somebody got the idea to put another highway in the state of Hawaii. It is called H3. It goes 16.1 miles. It was thought to be a good idea. Thirty-seven years later, it was opened. The environmental impact statement (EIS), I am told, is 3 feet tall. The highway cost \$1.6 billion.

We don't have the money for that kind of project anymore. I don't think you will ever find another highway built on the island of Oahu. It just takes too long and costs too much. But we need to start thinking outside the box. If you are not going to have the highways, then what else is there? That is where I come in. And that is the maritime. There are maritime solutions to some of our critical problems in congestion, in moving people and goods.

I come from northern New Jersey. Most of what you see in New Jersey is the congestion as you are rolling down on your way to Philadelphia, Pa., or up to New York City. One way to solve the congestion or at least to lessen it is to use ships to move freight down the East Coast from New York to Jacksonville, Fla. There are people who are thinking about that.

Thinking outside the box is thinking about using ferries to move people. When I grew up, there were two ferries in New York and New Jersey. There was the Staten Island Ferry and there was the Brooklyn Ferry. In 1904, there were 30 ferries. We are now at 1999, we are back up to 30 ferries in New York and New Jersey, including a really nice ferry that will get you from LaGuardia Airport to East 61st Street in about 25 minutes.

Again, it is called using your marine transportation system to solve some of the problems. I am not saying they are right for everybody, but what I am saying is for too long the marine transportation system has sort of been a stepchild. It hasn't had the resources. It hasn't had people thinking about using it as a way to get around some of the problems that we are having.

Here is a favorite story for those of you who come from Washington, D.C. About 3 months ago a gentleman was having marital problems, family problems, and decided to end it all by jumping off a bridge in Washington, D.C. He did it about 4 p.m. and, of course, the police closed the bridge.

Unfortunately, the bridge was the Wilson Bridge, the main bridge between Virginia and Maryland. Within hours, there was an 8-mile backup in each direction, and some very un-Christian-like suggestions of how to get the gentleman off the bridge.

The point is the day before there had been a news report of someone proposing to start a ferry service from Woodbridge, Va., to D.C. as a way to reduce congestion. Now, at the time—remember, this is the day before the jumper—the news media had a great deal of fun ridiculing the project as being too costly. I would have liked to have gone back the day after the bridge incident and asked the news media what they thought of the project and the project's cost then.

We need to start planning for these things now. The year 2020, when trade will double or triple, is just around the corner. I have got a grandnephew who will be 22 about that time. We need to start planning for these eventualities. We need to start planning for moving freight if it is going to double. Where are we going to put it? How will we get it there?

The last factor that I will cover is the aging population. Two things when you have an aging population: (a) more leisure time and (b) more money to spend.

What does that translate into? It translates into a couple of things, but one thing it certainly translates into, if you believe the figures I read, is more people taking cruises. Now, that leads to several things that you need to worry about: If you have cruise ships that have 2,000 passengers each, and these ships are in service now, what are you going to do? How are you going to plan to take those 2,000 people from the ship and into any town they enter?

What is going to happen to your infrastructure? What is going to happen to your services? What is going to happen to the quality of life of the people who live in the town the other 51 weeks of the year? All of that needs to be planned now because, not surprisingly, the cruise ship industry is growing about 8 percent a year. What you can look forward to, I promise you, is bigger cruise ships. They already are being built.

The ones in Europe being built now will hold 3,000 passengers and there are more of them and the passengers will want to go more places and they will want to do more things. Planning is needed for these eventualities. It has got to be statewide planning. In fact, I will go a step further.

It probably has to be regional planning because there is no way—to go back to my commuter ferry example—that the Port of New York can plan for ferries without the active participation and concurrence of the state of New Jersey and probably the state of Connecticut.

There is no way you can put a ferry in San Francisco Harbor to go from San Francisco to Oakland without having both jurisdictions at the table. We could multiply this scenario by as many times as you would like. So, we need to begin planning. We need to begin it now because the world is not going to wait. That is the other thing.

If you don't want those cruise ships in your back yard, that is fine and that is a decision you can all make. But I guarantee you they are going to go somewhere, and whoever has the infrastructure ready when that cruise ship starts planning its next season is going to have a leg up on getting the cruise ships.

If you don't like the cruise ship example, let's go back to freight. The largest freight container ship now plying the waters carries 6,620-foot-equivalent containers. It is the first in a series. To give you some perspective on how big it is, it is just 50 feet shorter than the USS *Harry S. Truman*, which is the latest aircraft carrier to join the U.S. Navy's battle fleet.

The question is, when it comes into your harbor, can it get in? Once it is in, can it get out? Let me just put it in perspective. To get into New York Harbor when it made its maiden voyage this new ship came into New York Harbor only when they lowered the antenna so it could pass under the Verrazano Narrows Bridge. It had unloaded half its cargo in Halifax, Nova Scotia, because it requires almost 50 feet of water underneath its keel when fully loaded, and New York Harbor has somewhat less.

Now, of course, you can decide after planning and after discussion, that you don't want these vessels in your yard. That is fine. But you have to plan one way or the other because if you don't want them in your port, then the question is how do consumers in your area get the goods that were going to come through the port? Are they going to get them by road? Is there a rail line?

Planning is what is needed now more than ever and much more of it than we are doing. All of these questions are out there.

Just to give you an aside to really keep you up nights, naval engineers tell me that an 8,000-TEU container ship is physically possible. As a matter of fact, there is one guy I talk to every now and then who says 10,000-TEU ships are possible; that it really is just a matter of length and balance and other concepts I don't understand, but he says it is possible.

You may not need to have the 10,000-TEU or 6,000-TEU ship in your harbor. However, if they don't come into your harbor or if they don't tie up at your dock, you may have them in midchannel, which means what you are talking about is smaller ships unloading the bigger ship and bringing cargo in to port that way. Well, are you ready for a lot of small ships? Or are you ready for one big one?

Carry that over to commuters. Are you ready to have them get off in mid-channel on motorized boats to take them into shore? Here is another example of planning and also partnerships in intermodal. The state of Hawaii is looking at two ferries. They want to do an intra-island ferry just on Oahu and they want to do an inter-island ferry to connect the other islands.

At an early meeting on the subject there was general agreement about the utility of ferries and how they could solve the island's transportation problems. Naturally

everybody is feeling good, and then the woman who runs the island bus system stood up. “One question. Where is the room for my buses?” And somebody said, “Well, you know, buses, we are sorry, what are we going to need buses for? We have got the ferries.”

“Unless you are going to make the ferry into basically a bus, ring the bell and get off, I need places for my buses to take the people from the ferries and ferry them to their offices.” Again, a very simple matter but absolutely vital.

I want to let you know that planning and research, now more than ever, as soon as possible, is necessary. It is not going to get any easier. There are a couple of reasons. Speed, when you are talking about freight, kills. If you are the first one to get Nike shoes to Foot Locker, you win. All those other companies lose. Regarding commuters, there are people who are planning 40- and 50-knot ferries, high-speed ferries, catamarans. You should see some of the designs that are out there. But 40- and 50-knot ferries change the transportation requirement all around. Everything will change. Nothing will be the same, and everybody needs to get involved in planning for the future. We don’t have any time to waste. There is a lot of work to do.

CHIEF EXECUTIVE OFFICER ROUNDTABLE

John Horsley, Executive Director, AASHTO, presiding
Joseph Perkins, Commissioner, Alaska DOT and Public Facilities
Sid Morrison, Secretary, Washington State DOT
Bradley Mallory, Secretary of Transportation, Pennsylvania DOT

Horsley: One of the biggest challenges that we in AASHTO are dealing with is this area of how we streamline the process. I know that each of you, in each of your states, is on the cutting edge of how you do a better job of helping the federal review agencies. After we have completed the NEPA process in many cases, we are subject to permits and signoff reviews by the U.S. Army Corps of Engineers, Environmental Protection Agency (EPA), etc.

Let me start with Joe. How have you, in Alaska, with the myriad of federal agencies that you work closely with the myriad of highway, port, aviation projects, found a way to improve collaboration, staffing, so that you get expeditious response from your federal colleagues?

Perkins: We are doing something in Alaska that, so far, is working pretty well for us. I am not sure how widespread it is. One of our problems in Alaska is that 75 percent of our land is wetlands, even up in the mountains. You look around here and you will be surprised how much of this mountain, behind us here, is classified by the Corps of Engineers as wetlands.

One of the big problems we have is, after you do all the EISs and all of this, you still need to get the Corps 404 permit. So, we in Alaska have entered into a working agreement with the FHWA and with all the state and federal resources agencies involved to integrate the FHWA NEPA requirements into the Corps 404 permit process.

This agreement is applicable to anything that we would do that would require an EIS and environmental assessment, and which requires a Corps 404 permit. Basically we

have done the 404 permit requirements as we do the EIS. We don't have to basically go through all this environmental side of the fence to get the permit.

We don't do this process on all our projects, but we do it for our typical, larger, more controversial projects, and when I say controversial, I mean controversial perhaps in the environmental mitigation sense.

Now, before I go further, let me say that we were very, very successful in getting people to sign onto this. All but one federal agency signed on. The pressure that is being applied to that federal agency is rather ferocious right now, and I think that this one federal agency, which I will not name, will probably be signing on fairly soon. They are certainly out there all by themselves right now.

This process ensures that all the environmental concerns are identified at an early stage. There are no surprises. We have these folks on board from the beginning of the project or the beginning of the EIS. It assures that the 404 permit-related requirements are in the EIS.

Prior to using this process, in some cases we would do the EIS and find that it did not meet the Corps requirements for the Section 404 permit. Using this procedure also gives to us agency concurrence or nonconcurrence at key critical points in the planning process.

We also include in the agreement, believe it or not, a dispute resolution procedure. So it helps us resolve disputes and identify those things that people are going to come out of the woodwork and nail us with. Hopefully, it eliminates surprises.

It does a lot of other things that I will not get into, but let me give you a few mechanics of how this thing works. There are four annual meetings a year that we have with these agencies, and we actually sit down and talk and plan which projects we are going to use this merged process on and which ones we aren't.

The agreement provides three concurrent points, and each concurrence is basically a written determination that the information that we have developed at a given stage of a project is adequate and that the project may proceed to the next stage. So, we actually go in and basically get agency concurrence before we move to the next stage.

The first of the three concurrent points is the purpose and need of the project. We go no further until we get everybody to agree with the purpose and the need. The second one is a decision point on the alternatives to be carried forward, and the third one is the preferred alternative.

This basic agreement that we have with all the agencies is running out. In fact, we are renewing it right now. That is why I say, we hope to get the other federal agency on board as we renew this agreement. In our renewing of it, there are a couple of things that I would like to see changed. I would like to see the purpose and need taken out. I think that it is the transportation department's job, to come up with the purpose and need, and we have had some problems agreeing.

Then the second thing is we put a time frame of 50 days for the concurrence on each one of these decision points. That is 150 days total, if you add all 3 of them up. We want to reduce that to 21 days.

So, those are the two changes we were going to want to make in the new agreement that we are negotiating now. It has worked well for us and, again, I think it is cutting time out, particularly with the quantity of wetlands in Alaska, and the difficulty that we have had in the past with 404 Corps of Engineer permits. John, thank you.

Horsley: Thank you, Joe. Many of you, like Neil and I, have been in dialogue with several federal agencies about this new provision in TEA-21 that now permits states, at your option, to contract for supplemental services from federal reviewing agencies.

That idea was really put into the bill based on an experience that Brad has pioneered in Pennsylvania. Maybe you can tell us what you have been doing in this regard in Pennsylvania.

Mallory: Like many of you, in the late 1970s, we had agencies reviewing and commenting on NEPA documents. These documents were voluminous, self-serving, and encyclopedic. The agencies really had little input into project alternatives, and they began to chafe at that and began to request some specific mitigations, usually stream mitigations.

Throughout the 1980s, the NEPA litigation introduced scoping and cooperative agency concepts. There were wetlands alternatives analyses that came into being. The documents were still voluminous, self-serving, and encyclopedic. We had a state environmental review committee, which gave them some more input into the alternatives, but it was often after the NEPA process was over or far advanced. They always requested wetlands and stream mitigation at a 1-to-1 ratio and we were at about 6 to 10 years for the process, which was not a state of affairs that anyone was comfortable with.

For about 3 years, late 1980s, early 1990s, we came up with a so-called transportation project development, interagency coordination meeting. It was the hinge point, it was the seeds of something pretty good, and we actually, by involving all these agencies up front, began to get agency input on the project need, alternatives, and mitigation, from scoping through NEPA approval and section 404 permit issuance. They still always requested wetland and stream mitigation at over 1-to-1 ratios, sometimes going as high as 5-to-1. Some issues, though, couldn't be resolved in the NEPA process, and we saw delayed section 404 permit issuance more often than not.

Throughout the 1990s, we began the process that we are essentially using today, our so-called agency coordination meetings. We have those meetings twice a month, and we use that 1-step transportation development process of ours that you have probably heard about before. It incorporates the NEPA 404 process. It has five consensus points. We did 65 EISs concurrently through that process, and got them through. I mean, it is a remarkable tool, once you get the thing up and running.

I gave you the context because it did evolve over a significant amount of time. We, too, have an arbitration process. We have only had three projects, one EIS, and two environmental assessments, which required arbitration or conflict resolution, and they involved that same nameless agency. The NEPA approval process time has been reduced from an average of 6 to 10 years to 3 to 4 years.

To be just a little more specific, we have an interagency document that everybody has signed onto. We have specific operating procedures for these interagency coordination meetings. We have a 10-step transportation project development process, a handbook. Everybody has it. Everybody essentially buys into it. We have FHWA, EPA Region-3, which is obviously our region, NEPA 404 process guidelines, with a handbook and guidance papers. We have literally got this thing papered.

We have a full-time agency coordination manager in our bureau of environmental quality, and Mike Ryan, our Deputy for Highway Administration, as many of you know, has a specific bureau dedicated to environmental quality. We have 11 engineering

districts and 11 transportation project developmental engineers—essentially environmental managers. We have an annual meeting and field view schedule that is established in December. We have a directory that everybody can consult.

We have a meeting and then we have 2 field days, on top of the 2 meetings per month, at a minimum, mostly because of the huge volume of stuff we are pushing through the process. They get their agenda 4 days before the meetings. We tape the meetings. They get their minutes within 10 days of the meeting.

I am stressing this because it is very important. It is very difficult to keep everybody with you and to keep faith. We fund full-time positions in many agencies. At the Pennsylvania Fish and Boat Commission, we fund two positions. Now, these are their employees that we fund. I think you will hear an even better arrangement from Sid. Two employees at the Pennsylvania Game Commission, two at the Pennsylvania Historical Museum Commission, one at our Department of Agriculture, three at the Department of Environmental Protection, two at U.S. Fish and Wildlife, and one at EPA.

We are trying to arrange for three funded positions at the Corps of Engineers, two more at the Pennsylvania Historical and Museum Commission, one more at our Department of Conservation and Natural Resources, which is essentially state parks and forests, three more at the Department of Environmental Protection, and one in our Commerce Department.

We have performance measures and evaluations for these agreements. That is a sticky matter and does cause a little heartburn and heartache from time to time. We are engaged in continuous training on the policies and procedures. We involve the agencies from the get-go, once again, in the project scoping. We try to get them out to the public meetings, workshops, and hearings. That is a little difficult. They are not quite used to seeing the villagers with the ropes and torches, the way some of our people are. Our guys probably wouldn't go if they didn't have to, either. We have established review times in the process. We started teleconferencing.

If this sounds like a shotgun or a scattergun approach, it is. We have just been trying to nick away at it in every piece, every corner, build the confidence, improve the process, piece by piece by piece by piece.

For the most part, we think it is working. Many of our own folks in the field are a little suspicious that we have gone over to the other side, so to speak. I don't see it that way. I don't see it as two sides. I think there is just one side, getting the job done for people. They see it that way, too, on their better days. We have been pleased with the process. It continues to evolve. Thank you.

Horsley: Thank you, Brad. Now, any and all of you know the challenge that a state DOT faces in planning the network of improvements to improve mobility and access in a typical state.

Sid Morrison, of late, has been faced with an additional challenge. How many of you have eaten salmon somewhere in the last couple of days? Hopefully those were Alaskan salmon, rather than the threatened and endangered species that have been declared in just about every water basin in Washington state. So, Sid is facing an overlay of life in general, plus the Endangered Species Act. Sid (ESA), why don't you describe how you are responding.

Morrison: Thanks, John. When I first went to the DOT in 1993, an old friend of mine was heading the state Fish and Wildlife Department. They had adopted a no-net-loss policy on eel grass, which is a grass that grows underwater. The no-net-loss policy had actually become a no-loss policy. They wouldn't grant a permit on anything. So this was sort of my entree into the environmental field.

I said, as a farmer, I had trouble believing you couldn't grow eel grass somewhere. So, I said, what is your research on it. Oh, we have never done any research on it; we don't have any money to do any research. Ah-ha, a lightbulb went on in my head. We struck a partnership whereby we would use transportation dollars to fund research on how you could replace eel grass, or at least help it grow and that sort of thing.

The key was, all the way through for us, that any investment we make in the environment, we have to get credit somewhere against a road project or ferry terminals, that sort of thing. This approach has worked very, very well. I think we are at about a \$50 million-per-year investment in environmental matters. Those agencies that have been starved for money for years are eager to be partners, as long as the cash register rings occasionally. We can be partners if we actually buy something on behalf of mobility.

That kind of leads you in a little bit to a cooperative approach that we have taken in recent years. I give credit to a lot of people, including Charlie Howard, through planning. We have a wonderful environmental affairs office leader, who has this ability to work with other agencies. So, we have built a relationship of trust with a number of the regulatory agencies from whom we have to get permits. That led to an approach that we have taken, which is certainly not as elaborate as that described by Brad, and it is a little different than what Joe has mentioned.

We have now, with the threat of a number of species—particularly salmon, now bull trout which is even wider spread—basically all the state is now covered with endangered species listings; we have found federal agencies, particularly, slowly being starved to death. As a member of Congress, I can tell you, if you are hammered in the election because you took some votes against the environment, guess how you express your unhappiness with environmental regulations. You starve the agencies to death, and that is exactly what has happened.

So, our response has been, with the help of our legislature, to actually take state employees with the capabilities that we need, who know the environmental side of our issues, and place them in a number of agencies. Four of them are federal agencies, and I think I may even be naming this one that refuses to get along with either Alaska or Pennsylvania; the Corps of Engineers; National Marine Fisheries, which is vital in particular the ESA; U.S. Fish and Wildlife; and EPA.

We have also done the same thing now with our state fish and wildlife group, because they all will have a significant say in the permitting process under the ESA. By the way, the fun part for me was who told me about this. We had a couple of DOT people come in, but the person from the state Department of Natural Resources who was working on our staff (we traded staff people with them) was the one to describe this whole process to me. So we have a sort of interesting family approach to dealing with this.

Our next step will be to move, under the ESA, from biological assessments where you look at an individual fish in an individual setting to programmatic approvals under ESA where if you did this sort of a job before under this set of circumstances, and it came

out okay, you can do it again. That is what we are working with local governments, to have them piggyback on this same process.

Here is what DOT has discovered. Like on eel grass, we found that if we paint the bottom of our ferry terminals white, you can grow eel grass in the shade. So there are things that you learn as you go along. I think in order to make our approach work, by the way, you have to have the relationship built in the first place. We have also found that we can hire employees through the state process faster than the federal government can even think of. So, when we have permits waiting and processes waiting, we can put people in who can handle them rather quickly. If we don't get the kind of service that we should, we can always pull these employees right back in under our umbrella, and I think they will be very valuable assets to us in the future.

Horsley: One of the issues that the National Association of Counties, some smaller cities, some rural communities were raising during the TEA-21 debate was whether they are getting satisfactory involvement in the planning process, whether rural areas are getting a decent share of the funding. Are they being included, is their voice being heard, are they receiving a fair share of funding?

Let me ask each of you in turn to touch on how you are approaching your communication and statewide planning with rural communities. Joe?

Perkins: I can just answer that in about 10 seconds. I have Tom Brigham. That takes care of an awful lot of it.

It is a good question. We have that problem here as well, as I am sure the rest of you have it. The one thing we have done in planning, which I think has been a major step forward, and I think it is the first time it was ever done in Alaska, is we are now in the process of doing regional transportation plans.

We deal with multimodal issues in this state. We have responsibility for virtually all the airports in the state, so we have to make as many airport decisions as we do highway decisions, plus we run the ferry system in the state. So, we do control the multimodal side of things.

When you start divvying up projects to various communities in a state as large as Alaska, what is the impact of that project on another community? For example, we may have a community sitting out there and they need an airport. The community is going through our process, and the FAA process for a runway extension, from a 2,000-foot runway to a 3,000-foot runway.

What we found out is that no one has considered that all we need to do is put a little bridge in, and we will connect two communities. We can take that same amount of money, and we don't need to redo that airport. All we need to do is get them to another airport.

What this led us into is what we call our statewide regional planning concepts. We go into unique portions or unique areas of the state of Alaska, and we break it out as a region and we do regional multimodal, and the multimodal is extremely important transportation planning. We are determining what are we going to build in the next 20 years to serve the transportation needs of that region.

When you get down through it and you sort through all the planning process, the big thing that comes out of it is a list of projects, because that is really where you are heading. We establish a priority of those projects, and a funding plan, and a schedule of

when you are going to do them. This is exactly what comes out of our regional transportation plans. We recently finished our first one, the Southeast Alaska Transportation Plan.

Now, we do these a little differently than in some other states. We do these all at the state level rather than the regional level because we have a lot of these regions that cross our DOT boundaries. So, we do them at the statewide level.

Now, when you do one of these regional plans (and this gets back to how do we handle our rural communities) you have to have the buy-in of every community in that region, one way or the other, because everybody is looking at various things. We go in and set up big advisory committees. We get all the mayors on board, committees, and we go over the regional plan. You will be surprised, for example, that when this mayor who wants his airport extended sees that he can get a road access, he will change his mind because he is seeing the whole regional plan. He is not just seeing where his community stands, he is seeing the whole plan.

We have found this extremely valuable. It took us 2½ years to finish the Southeast Regional Plan. It resulted in about \$400-or-so million worth of projects. We have already started them. We have about \$100 million of them programmed. We decided with a community: are we going to extend your airport, are we going to give you a road, or are we going to give you ferry service, all of this looking at transportation over the next 20 years?

We have finished one of them, which was widely accepted. Every community loves it except one little tiny community that lost its ferry service, and the residents don't care for it. Ninety-nine percent have bought in. Community councils have bought in, assemblies have bought in, and the cities have bought in.

After the Southeast Plan, we have four others underway ranging from 70 percent completion down to 20 percent. We are just starting that one for northwest Alaska. We are using demo money to do it. They gave me some money that said, check out a railroad from here to Nome. So with that money we are going to do a Northwestern Transportation Plan to the area of Alaska that probably has more mineral resources than anyplace in the United States but no way to get them out. So we are going to take that on.

We are doing one for Prince William Sound which, if you just go over this mountain here, you are in Prince William Sound, that is at Whittier, Alaska, which is the start of Prince William.

We are doing one for southwest Alaska. We are doing one for the Yukon Delta—the YK Delta as we call it. That one is particularly interesting, because in that area there are basically only native villages and how in the world do we provide transportation to native villages? Right now it is mainly by air.

What we also hope is that the communities in an area will use this regional plan to develop their own local plans.

For all of these regional plans there is a need for an umbrella. The umbrella that is sitting over all our regional plans is our statewide plan, which is a generic plan of where we want to take the state. Then, all the little sections of the umbrella are the regional plans. Where are we going in the regions? What are we going to do in the regions? The local plans are left to the locals, with the exception that we deal with a lot of places that don't have staff to do planning. In those cases, Tom provides the necessary assistance and, in some cases, we do the local plan for them as a side project.

We feel this is drawing our rural communities and, in fact, all the communities of this state into a planning effort that they have a piece of, and they are going to buy off on, and they like it.

You know, public involvement can be defined in a lot of ways. There is, however, only one definition and that is, Did it work or didn't it? If it didn't, I don't care what your plan is; it isn't any good.

So, we feel that this is working for us. We are going to continue it and it is a concept that I think has great potential to be used in a lot of places. But you have to do it on a regional basis because you have got to figure the dependence of this community compared to the dependence of this other community on what you build. How does it affect them? Up here there is a lot of effect.

I want to say one other thing before I leave. I want to welcome you all to Alaska. Thank you all for coming. I know Tom has been a wonderful host.

Planning is important in the state of Alaska. When I took over, the person who had held my job had decimated the planning division. We have statewide planning built back up to be very strong.

Horsley: Sid, do you want to go next?

Morrison: In our state, an interesting thing happened. We have sort of drug our feet after our neighbors, Oregon, on growth management planning. The year that I voted for ISTEA, when I was a member of Congress, Washington state was passing the Growth Management Act. In that act, it created regional transportation planning organizations (RTPO). So, we had this interesting mix, then, of MPOs under ISTEA and regional transportation planning organizations. In many cases, in larger urban settings where we had metropolitan planning organizations (MPO) and RTPOs, they are exactly the same body.

Some of the conflict between urban and rural at least has had a chance for a forum, and I think it has worked pretty well. In many cases, our more rural settings or economic development councils are part of it. In some cases, those RTPOs operate with DOT staff support, where the governments aren't big enough to have their own staff level.

I think this has worked very well. Charlie, I have to give credit to you and Daniella and others, because this planning has just sort of flowed together, as far as I am concerned. With the ownership that comes with that sort of planning, I see fewer conflicts between our truly urban and rural areas, particularly as we update our state transportation plan now. Every step of the process has been coordinated with these local and regional transportation planning folks.

I also want to mention that we have been fairly flexible with the federal money that is available, the specialized technical publications (STP) discretionary fund. Under TEA-21, the governor took the top 22 percent, and no one argued with him because it was for rural economic development; that is, paying for transportation projects that would actually fund, for the first time in our history, a potential sizable investment in making sure that the transportation elements needed for rural economic development were not lacking. That seems to be going well.

Then, the balance of discretionary funds: some come to us as the state DOT, but others are guaranteed on a regional competitive basis and then on a statewide competitive

basis. We can compete for them as the DOT, or regions can compete for them on their project basis. So far, I think this, thanks to planning, is going to work pretty effectively on what is normally, in government, a very significant area of conflict.

Mallory: We have 15 MPOs, at least partially in Pennsylvania, and all of them have been involved in the process since the late 1960s with the exception of Hagerstown, and that is because it is in Maryland. It just crosses over the line.

Having said that, we also have the largest rural population in the country, in Pennsylvania. So we had a huge amount of the state and number of people not involved in the process by virtue of not being located in MPOs.

So we created a rural counterpart to the MPOs and essentially empowered them and treat them as if they were MPOs. We now cover the entire state with the exception of three counties. They don't want anything to do with anybody else. But we are working on them.

What we have done is, as you probably have heard from Larry King, is to reengineer the planning process, and this has been a very intriguing thing to see. Those of you who know Larry know that Larry was sort of the arch-druid of transportation planning and programming. He knew everything there was to know about the planning and programming of Pennsylvania, and it was right here, and he would show it to you if he liked you, you know.

That was a great strength for us and it was a dangerous world we lived in, and it sort of made sense. Larry came to the realization, along with the rest of us, that that probably didn't work so well any more. So Larry has become a born-again information sharer.

He led a radical reengineering of this process that has literally opened that book completely to the point where we are in the process of automating and providing automated access to all of those MPOs and local development districts, to the entire program detail, to the minute detail, and on a real-time basis, so they can also monitor implementation to see that they are really getting the dollars that they thought they were going to get.

What he did was use a very, very severe, very rigorous process to develop this, and it was literally right out of a reengineering textbook. They locked people in a room and did diagrams and wouldn't let them out until they had the things done. They got it broken down into minute detail. They split up into about nine different work groups.

We went through one iteration of the process, and it really did work like a charm. In the previous iteration I ended up in at least three separate motel rooms in three corners of the state until all hours of the morning negotiating with MPO boards. This time there was none of that.

The statewide, the MPOs and these local development districts, long-range transportation plans, are the things that are driving our 12-year program in Pennsylvania. The department and all of these partners reached consensus on all aspects of general, procedural, and financial guidance before the program update process began.

We did a split. We kept annually \$25 million out for some economic development projects and \$150 million out for "spike" funding, with the remainder distributed by a formula. We really brought the focus down hard in the near term, 4 to 6 years. That was a bit new for some of the agencies. The State Transportation Commission, which is a statewide body that essentially advises the governor and me on what ought to be in the

program, got involved earlier in the process so that the MPOs actually had a chance of influencing their decisions.

The process is now producing standard products; that is, the product from northern, central, rural Pennsylvania looks like the product from southeastern urban Pennsylvania, at least in form and category, so that you can relate the two. They are very different products, obviously, but you can understand how they relate to one another.

I still get to resolve any stalemates that can't be resolved because they trust me more than they trust each other. So they were willing to agree to that. It has been a very, very fruitful process for us. We went from the extreme of, when I first became secretary, literally having every major elected official and every planning official in the state maintaining that they weren't getting their fair share. You have all been there. Every one of them is not getting their fair share. That tells you something. In the process now, I think that they may still believe they are not getting their fair share, but they feel better about it. I am being facetious. I think they like the process now. They believe it. They can see the numbers. They know they are real. There is no place to hide for us. There is no sleight of hand here to pull on the process.

It is a better process. I think it is going to pay handsome dividends for us in the long run.

Horsley: Let me put one final issue on the table. You have been following in the press and you have been following in your lives whether it is smart growth in Maryland, growing greener in Pennsylvania, growth management in Washington state—what do you call it up here, Joe? What is the future development pattern of our communities? The citizens are getting ornerier. A lot of the governors and the legislators are tuning in and telling transportation you can't proceed in isolation from the land-use planners and the MPOs and the communities, as they shape the future of America's communities, deal better with sprawl.

How are your states managing this growth management, sprawl, smart growth issue?

Morrison: Very carefully. I think I mentioned earlier the fact that we got into growth management along with the real birth of federal support of transportation planning across the states. That has really helped us. We have a concurrency issue, too, and Charlie Howard has had to do some tinkering with the growth management act to make sure that state priority projects actually had the right of way over some local jurisdiction. As you know, they don't always like it when the road comes through or you have to terminate the ferry program that serves a particular area.

I guess the latest experience that I want to sort of run up the flagpole here in front of you is that we were asking federal highways for the okay on adding an interchange that is vital to making our urban growth boundaries work in the greater Seattle area. They have started, at least, by saying no. We think eventually they are going to say yes. Then I listened to the vice president talking about smart growth as a policy on the federal level.

I found it in direct conflict. So, I have raised that now with federal highway officials to say, hey, please go back and look at what your leadership is saying about smart growth and how it interfaces with transportation planning and the projects that we eventually build.

I think we are going to find that there is a significant conflict there. They don't want to add congestion to an area of the freeway—say, taking it from a service level C perhaps to D or B to C—and, yet, that is an absolutely vital element of making urban growth boundaries and growth management plans work.

So, this is an area that will require a lot of work. I hope we can do, then, the melding through our state planning organizations that needs to take place so that the federal regulators have some confidence in the state growth management that we are all trying to put together. Then, make the total transportation, including the federal part, fit in serving that plan.

I think that is smart growth and we are all going to have to work together to resolve some conflicts, just between levels of government.

Horsley: Let me just comment, in my last incarnation working USDOT, I thought I had brokered a deal on that intersection with federal highways to expedite the right-of-way acquisition through a very novel approach of letting the private sector take the lead, acquiring it prior to the project proceeding with federal funding. That worked, and now this other issue has reared its head on service levels on the freeway. It is fascinating. It is hard to keep the genie in the bottle sometimes. Brad, how are you doing with growing greener?

Mallory: I wouldn't claim that we are any kind of a leader in the area of growth management. Some of our neighbors are, as you probably know. We have done a great deal in attempting to make our corner of the business make more sense, and we have been doing an ISO 14001 gap analysis, which we have completed now, and we are putting in motion a ton of work to close those gaps.

I doubt that we are going to seek ISO 14001 registration or certification, whatever it is called. It is very formulaic and rigid and it makes a lot of sense. We are working very hard internally in our process.

In a funny way, we have not had the dramatic and explosive growth in Pennsylvania, of course, that some of the jurisdictions represented here have experienced. Even at that, we are still sort of in the mop-and-slop aspect. We just come along afterward and try to clean up behind it and catch up with it, as most of you do. I do not dispute the need for growth management in any way, shape or form. It is real, sprawl is real, in my judgment.

On the other hand, I think transportation's contribution and role in it is a bit misunderstood and is perhaps a little bit less than is popularly believed. Interestingly enough, at the governor's urging in Pennsylvania the state has set up statewide focus groups, focus groups across the state in furtherance of the governor's so-called 21st-century environmental report, which is his growth management initiative.

Those groups are very telling. Folks are concerned. They are very concerned about retaining their sovereignty, I can tell you that. We have 2,600 municipalities in Pennsylvania and essentially a weak county form of government. It is more like a New England town government model. They want their sovereignty. They also want the benefits of regional cooperation and coordination. They want both; they very clearly want both.

It seems clear to me, we are going to have to find a way to give them both or fail, one way or the other. If we believe that we can, in some way, foist or force centrist

planning on them, they will just, as they should, shut it down and we won't do it, or it won't work.

If we merely attempt to let business continue as usual, it will just balkanize and we will fail there. So, we have got to find a way to give them both, and we don't know what that is. I am certainly open to suggestion from those of you who are further along the path than we are.

I suspect that it involves a lot of virtual organizations and ad hoc kind of organizations and the kind of reengineering that we use in the metropolitan planning organization, local development district process. In many respects we are trying to balance the same competing needs there as well, and we have done so relatively successfully.

I think that, at the national level, that is what we have to be directing the policy makers toward if we are going to achieve success. Otherwise, we are going to get into a contest between the advocates of growth and the benefits of transportation for the economy and so-called quality of life advocates and environmental advocates and the like, and that seems to me a self-defeating contest.

Perkins: It is starting to affect Alaska, as our cities grow and Anchorage has grown. Anchorage is our only MPO, so we are starting to see, and have seen, air-quality problems, congestion problems, and we are starting to have to address them.

Alaskans are pretty independent. So far, on the land-use planning side of the house, there hasn't been a lot done. There have been a lot of plans in preparation. It seems like every time one gets prepared, it gets blown away, but at least we are heading in that direction.

I think, probably, more than anything else, transportation lets people know that we do have a problem. They can remember sitting in a traffic jam. They can remember being late to work because they can't get there. This starts to show people we do have some problems and wonder what we are going to do about it. So, in Anchorage and Fairbanks, yes, we do have air-quality and congestion problems.

It is a little bit hard to concentrate on those problems when we have over 500 miles of our NHS that is gravel.

So, we have a broad range of things that we need to do. A lot of the work in the lower 48 is rehab of existing interstates, for instance. That generally is for repaving and so on. Up here in addition to that gravel portion, we are working just to put shoulders on much of our NHS. We have got a way to catch up. We are behind. I think, as we catch up more and more, we are going to have more and more attention directed at the cities.

Now, there are several big jobs in Anchorage. All of you flew in here. You saw an interchange going in on International Airport Road. You are going to see more problems like that being addressed in the Anchorage area. However, we are looking to the MPO to basically provide the framework for the solution of those problems. We will certainly provide the funding, but land-use planning is going to have to come more, we hope, from the grass-roots level, and from the community, in terms of how these problems are to be solved.

Going back to where I am from, Missouri, and in the lower 48, we are getting some serious problems down there. I would completely agree with Brad, we are going to have to do some very, very interesting things in the next few years. I am amazed to go

south and experience the traffic in Seattle and other cities and look at what used to be farms that are now totally shopping centers or whatever.

Although I think we can perhaps show people the problem, I think people can see the problem from us. I really question whether we are going to be totally in the lead in solving it. There are some basic things that have to be done that really don't relate to transportation, as when restrictions are imposed on the majority of people who have never had these kinds of restrictions placed on them.

So, I think there are going to be some interesting times. It is going to be very, very challenging on the planning side, because however this goes, it is going to be our business to react, to do the best job we possibly can in providing mobility for the people.

Second, we need to also improve the quality of life of the people. I think we can do some more things on this front with our enhancements programs to make this a better place to live, because that is what people are really, I think, looking for.

We have got to remember one thing. We have experienced, through the last 12 years or so, the best economy this nation has ever had. When you have a good economy like this, there is a lot of dreaming about good things that people want to have. We also have to make sure that this economy keeps going and that our people have jobs.

I hope for the best, and I think we will be playing a role in supporting however all this turns out. Thank you.

SUMMARY OF DISCUSSION

Among the items discussed between the keynote speakers and the audience were:

- There was a discussion on the complexity of public agencies dealing with the private sector and using public funding in conjunction with profit-making enterprises. The use of loan guarantees and joint research and development activities were cited as two ways of doing cooperative activities.
- It was acknowledged that performance measures will be constantly refined and that we will be required to redefine our outcomes and what we are looking for from transportation programs.
- Federal modal funding and congressional earmarks are a fact of life. While changes are desirable in the future, we need to recognize the political decision process in our planning programs.
- Having written conflict-resolution procedures with specified time frames has several benefits, including creating an opportunity for quick resolution, early identification of the major issues, and the timely ability to escalate differences to a higher level without delaying projects indefinitely.