Chapter 4

Land-Use and Environmental Considerations

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Approaches to Transportation/Land-Use Interactions in Statewide Planning and Policy

The connection between transportation and land use is a fundamental concept in transportation planning and analysis. Transportation and land use are inexorably connected. Everything that happens to land use has transportation implications, and every transportation action affects land use. State DOTs help shape land use by providing infrastructure to improve accessibility and mobility. Accessibility can be measured by the number of travel opportunities or destinations within a certain travel radius, measured either in terms of travel time or distance. On the other hand, mobility is a measure of the ability to move efficiently between origins and these destinations. Thus, mobility is directly influenced by the layout of the transportation network and the level of service it offers. Land development generates travel, and travel requires the need for new facilities, which in turn increases accessibility and attracts further development. This chicken-or-egg issue is a matter of ongoing concern whether transportation influences development or if land use dictates transportation.

The state DOT is just one of the many forces influencing both transportation and land use. The other forces influencing land use and transportation are described later in this paper. Also described is the role of state DOTs in controlling the effects of transportation on land development through planning, transportation-related regulations, access management, and other programs.

This paper provides an overview of land-use activities of state DOTs. Such activities occur in the various states and along a continuum from passive to active in six major categories: land-use/transportation planning, state land-use planning capabilities, education/technical assistance, access management, land-use controls, and economic development. This paper deals with each of these categories.

This paper discusses how states incorporate land-use issues into their statewide transportation planning and policy efforts. This paper also looks at the direct role the state DOTs have in land use, as well as their role in the local and regional land-use decision making. This paper is a summary of a larger report that was conducted for the FHWA.

During the writing of this report, the authors attempted to contact all state DOTs to determine what each is doing regarding land use and economic development. This paper describes the framework that was used to describe activities of state departments of transportation related to land use. It provides an overview of some of the information found, but it is not intended to be exhaustive. Furthermore, the role of the state DOTs in land use and economic development is continuously evolving. This paper is intended to discuss the range of activities rather than all possible activities.

Local Versus Statewide Roles in Land-Use Decisions

In most states, land-use decisions are made locally by governmental review boards and elected officials. State DOTs typically defer to local governments on land-use issues; however, DOTs may have review authority when the development involves access to a state highway or causes traffic impacts on a state highway. By providing transportation facilities and services—be it through building highways, providing grants for local transportation improvements, or providing assistance to transit services—a state DOT affects land-use patterns in many different ways. Similarly, all development and land-use decisions will ultimately affect travel patterns and, thus, influence the decisions made by state transportation officials regarding project planning and programming. Transportation is irrevocably tied to land use and land development.

Even in states where the DOT feels it has no role in land-use decisions, its staff members find themselves heavily involved in land-use concerns. These occur through the environmental review process, by issuing permits, and by deciding where, when, and how to expand highway capacity.

Many other state agencies and local interest groups take prominent roles in decisions that directly or indirectly affect land use. Increasingly, coordinated efforts are being made by states to integrate programs and policies, serving to promote transportation options that can minimize harm to the environment, preserve sensitive lands, and encourage economic development. The state DOT is only one of many agencies taking part in these coordinated efforts. The level of support garnered from various state agencies and groups working together on transportation and land-use topics depends largely upon the individual state's political climate, history, and local issues. Hot issues in one area of the country or in a particular state may not be salient in others. A wide variety of factors must be taken into account when comparing various state DOT actions.

The state transportation plan can, through extensive public involvement efforts, develop action steps to successfully implement transportation objectives seeking to improve the positive link between transportation, land development, and economic development.

In addition, transportation planning regulations also require analysis of land-use impacts of transportation investment decisions at the project level. These regulations represent the most far-reaching call for coordinated land-use and transportation planning. However, no specification is given as to how to analyze land-use impacts of transportation investments or how land-use characteristics or development policies should be integrated into the transportation planning process.

State agencies may find themselves taking leading roles in developing coordinated programs and in bringing people together to the same table to ensure that transportation decisions consider the effects on land use and economic development.

Effects of Transportation on Land Development

State DOTs influence land development through providing infrastructure and, to a lesser extent, through transportation-related regulations. However, these influences are seldom part of a project's goal and are usually not intentional. State transportation projects are

normally planned to improve safety, decrease travel time by alleviating congestion, and achieve other mobility-related goals. Transportation's most significant impact on land development occurs when access is provided to land. Increased access to land raises its potential for development, and more development generates additional travel. Once access has been provided, land patterns begin to change over a period of time. The results of these changes are, for the most part, irreversible.

Emerging Land-Use Concerns

Recently, concerns about urban sprawl have grown in many areas of the nation. Many diverse groups have common concerns about the role transportation plays in exacerbating or combating the problems associated with urban sprawl, suburban congestion, and jobs/housing mismatches. Some people have argued that efforts to expand the highway system contribute to urban sprawl by decreasing travel times from urban to ex-urban/rural areas and making undeveloped areas attractive for residential and commercial uses. Highway facilities, some time after construction, have experienced driving times that often exceed the predicted driving times, suggesting that new or expanded facilities may be unable to solve long-term congestion problems.

Several factors can be identified as contributing to sprawl, such as movement of jobs to suburbs, lower transportation costs versus lower housing costs, preference of many people to live in remote areas away from the problems of the city, and the desire for larger lots. This section provides an overview of some of these factors.

Of recent concern are labor shortages created by jobs/housing mismatches. Housing markets in the suburbs have excluded many skilled laborers who would traditionally be employed by the industries and commercial enterprises that develop in these areas. A combination of transportation and land-use measures are needed to address this problem.

The concern about sprawl and transportation has led to a new debate in many states and communities about the relationship between transportation and urban sprawl. In some cases, local and statewide efforts are now beginning to take effect to limit sprawl in some of the nation's fastest-growing urban areas. The new debate invariably involves state DOTs.

State Roles in Land-Use Activities

There are considerable variations between the state DOTs in their role in land use and economic development activities. Roles in an individual state can vary along a broad spectrum ranging from very active involvement in the coordination of transportation and land use to a very passive role, where the state leaves most of the decision making to other agencies. In order to help understand the spectrum of activity that states may undertake, a chart has been developed to show the range of state activities.(see Figure 1) A state's role can be defined along a continuum from active to passive in the following six categories:

- Land-use/transportation planning requirements;
- State land-use planning capabilities;

- Education and technical assistance;
- Access management;
- Land-use controls; and
- Economic development.

Each of these categories is described below.

Land-Use/Transportation Planning Requirements

At the passive end of the continuum, states fund regional and local-level planning and leave the decision making entirely to local jurisdictions. The option to do planning and how it is done is left to the local agencies. At the most active level, the state itself is responsible for planning and zoning, as is done in Hawaii. Between these two ends of the spectrum is state-mandated local planning where the state sets mandatory standards for land-use plans or may set guidelines reflecting the state's interests. A passive approach would require the planning to take place but not require state approval of the plans. A slightly more active strategy would require that local land-use decisions must have state approval and certification.

State Land-Use Planning Capabilities

The state can provide a range of capabilities to assist local agencies, depending on how involved they want to be in the planning process. As shown in Figure 1 these activities would range from providing data collection services for local government (at the passive end), to the utilization of sophisticated state land-use models and basic research (at the active end). The purpose of transportation/land-use models is to predict the future impact of transportation investments on land use. Some of the states using transportation/land-use models are Oregon and New Jersey. Intermediate state services would include providing geographic information system (GIS) assistance, policy research and economic forecasting.

Education and Technical Assistance

State participation in education and technical assistance can take many forms. At the passive end of the continuum, states react only to local requests for assistance. A more active state participation would include formulating state guidelines, convening oversight committees, providing conferences, holding training sessions, issuing newsletters, organizing a hotline or website, or providing public education. At the most active level of participation, the state would provide 1-to-1 assistance to local government for the analysis of land-use implications of transportation decisions.

Access Management

Access management is a systematic approach to providing appropriate access to land development on highways. Figure 1 shows the range of access-management programs that states have adopted. A passive approach is to allow unlimited access to the state

highway system so long as access points follow site-specific guidelines. A more active strategy involves the development of comprehensive access-management plans and policies. The most active strategy is to limit capacity expansion to only designated areas according to a statewide growth-management policy.

Land-Use Controls

Land-use control initiatives by a state encompass a broad range from simply including a topic in transportation plans or environmental impact statements to completely controlling land use. The various options available to a state involve different degrees of participation by state and local agencies in project-level control of land use and the project's environmental impacts, land-use control in environmentally sensitive areas, smart growth, scenic easements, agricultural and open-space preservation, growth management, and control of large-scale developments. Smart-growth programs bias the provision of state infrastructure to designated growth areas following state-mandated land-use plans. For example, the state of Maryland restricts the expenditure of state highway funds to areas designated for development according to local plans that have been written from guidelines provided to governmental agencies, developers, and local officials. Florida, Oregon, and New Jersey have adopted growth-management programs. Development of regional impacts (DRI) controls, such as those used in Florida, require a developer to demonstrate that sufficient infrastructure exists before proceeding with the project.

Economic Development

Economic development spans a range of activities that includes project design help to local businesses, state infrastructure banks, funding programs to promote basic employment opportunities, industrial roads, and provision of road facilities by the state for developments that generate both basic and nonbasic employment. Examples of state funding programs that facilitate economic development are the RISE program in Iowa and the TEA programs in Wisconsin and California. State infrastructure banks (SIB) are funds for infrastructure investment generated at the state or regional level as implemented in Ohio, Florida, and several other states. Industrial road programs pertain to the allotment of funds by the state toward improving existing road facilities that enhance accessibility to eligible industrial and agricultural facilities.

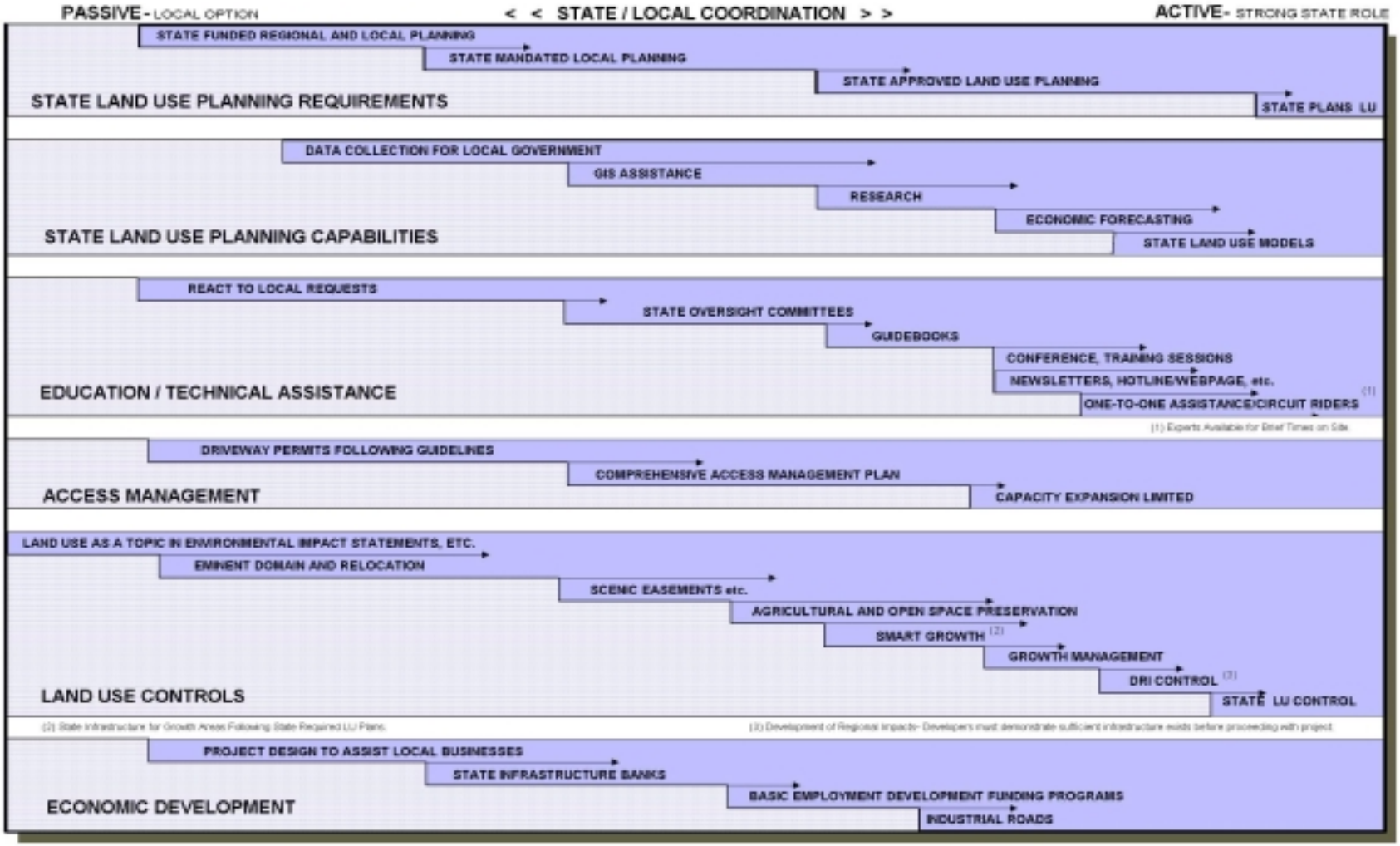
PASSIVE - LOCAL OPTION
< < STATE / LOCAL COORDINATION > >
ACTIVE - STRONG STATE ROLE
STATE FUNDED REGIONAL AND LOCAL PLANNING
STATE MANDATED LOCAL PLANNING
STATE APPROVED LAND USE PLANNING
STATE LAND USE PLANNING REQUIREMENTS
STATE PLANS LU
DATA COLLECTION FOR LOCAL GOVERNMENT
GIS ASSISTANCE
RESEARCH
ECONOMIC FORECASTING
STATE LAND USE PLANNING CAPABILITIES
STATE LAND USE MODELS
REACT TO LOCAL REQUESTS
STATE OVERSIGHT COMMITTEES
GUIDEBOOKS
CONFERENCE, TRAINING SESSIONS
NEWSLETTERS, HOTLINE/WEBPAGE, etc.
EDUCATION / TECHNICAL ASSISTANCE
ONE-TO-ONE ASSISTANCE/CIRCUIT RIDERS (1)
(1) Experts Available for Brief Times on Site
DRIVEWAY PERMITS FOLLOWING GUIDELINES
COMPREHENSIVE ACCESS MANAGEMENT PLAN
ACCESS MANAGEMENT
CAPACITY EXPANSION LIMITED
LAND USE AS A TOPIC IN ENVIRONMENTAL IMPACT STATEMENTS, ETC.
EMINENT DOMAIN AND RELOCATION
SCENIC EASEMENTS etc.
AGRICULTURAL AND OPEN SPACE PRESERVATION
SMART GROWTH (2)
GROWTH MANAGEMENT
DRI CONTROL (3)
LAND USE CONTROLS
STATE LU CONTROL
(2) State Infrastructure for Growth Areas Following State Required LU Plans.
(3) Development of Regional Impacts- Developers must demonstrate sufficient infrastructure exists before proceeding with project.
PROJECT DESIGN TO ASSIST LOCAL BUSINESSES
STATE INFRASTRUCTURE BANKS
BASIC EMPLOYMENT DEVELOPMENT FUNDING PROGRAMS
ECONOMIC DEVELOPMENT
INDUSTRIAL ROADS

Figure 1

Activities Chart

The range of activities from passive to active for each of the six topics is represented graphically in the chart (Figure 2). Based on the programs, activities, and regulations a particular state implements, it could easily be determined where it fits on the chart. Note that most of these activities are cumulative in their implementation. For example, under Land-Use Controls, Topic in Environmental Impact Statements spans the entire length of the scale from passive to active, and this element would coexist with any other option that is implemented by the state. Once the state policy/action is graphically represented on this chart, it can be used as the basis on which to consider future endeavors. A state could then choose to be more or less active by implementing other strategies on the chart. States can review the chart to determine if they should add options to each of the categories on the chart or add new categories based on emerging issues or new technologies specific to the state. This chart is intended to be generic and can be modified to represent the planning actions and programs implemented by any particular state.

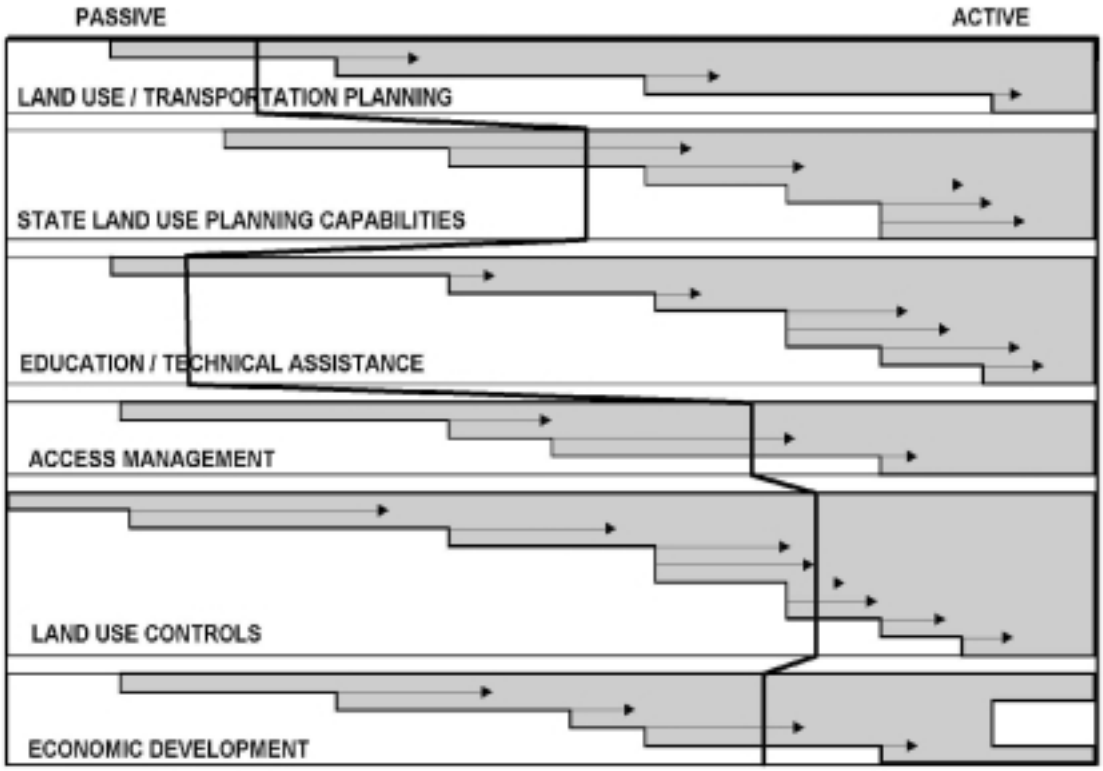

Figure 2

The use of the chart is illustrated by an example of a hypothetical state. In each of the various categories, the state is doing the following:

- Land-use/transportation planning. The state delegates land decisions to local municipal governments, and it does not require MPO zoning conformance

with a comprehensive plan. Thus, this state assumes a passive role in land-use and transportation planning.

- State land-use planning capabilities. The state assists the local municipalities in making transportation and economic decisions by providing them with information such as vehicle travel data. It also provides technical assistance in the development of GIS.
- Educational/technical assistance. The state is largely inactive in this field. The only form of assistance provided by the state to the local agencies is through prompt responses to unsolicited requests.
- Access management. The state has developed a success management system plan to indicate the network of state highways on which access will be controlled. This system plan aims at maintaining safety on the selected highways by regulating traffic flow through access management. The state also works with the local governments to review development plans that are adjacent to or affect the traffic flow to a state highway. Thus, the DOT plays an active role in terms of access regulation.
- Land-use controls. The state practices weak growth management by developing technical reference guides that would assist local agencies in assessing a project's potential in influencing land development patterns. The state also plays an active role in land use by participating in interagency councils that direct land use and initiate land-use reforms. The state has also organized focus groups with both state and local participants to provide the local governments with the necessary tools to make decisions that reflect statewide goals.
- Economic development. The state uses a development grant program to provide communities with infrastructure improvements that initiate both basic and nonbasic employment opportunities for these communities. Emphasis is always maintained on rural communities.

The next chart (Figure 3) shows the strategies adopted by the state. Thus, the thick line plotted on the chart displays the present position of the state

A review of the chart indicates that the state level of activity in outreach and technical assistance appears to be inconsistent with its other activities. The state may review its role in providing outreach and technical assistance in relation to its other more active programs. If the state were to be more active with regard to land-use transportation and planning, the state could consider implementing state mandated local planning, where the state sets mandatory standards for comprehensive planning. Similarly, the state could organize oversight committees, conferences, and training programs to assist local agencies. With the implementation of these steps, the new chart (Figure 3) representing state actions would look like the one that is more balanced in its aggressiveness.

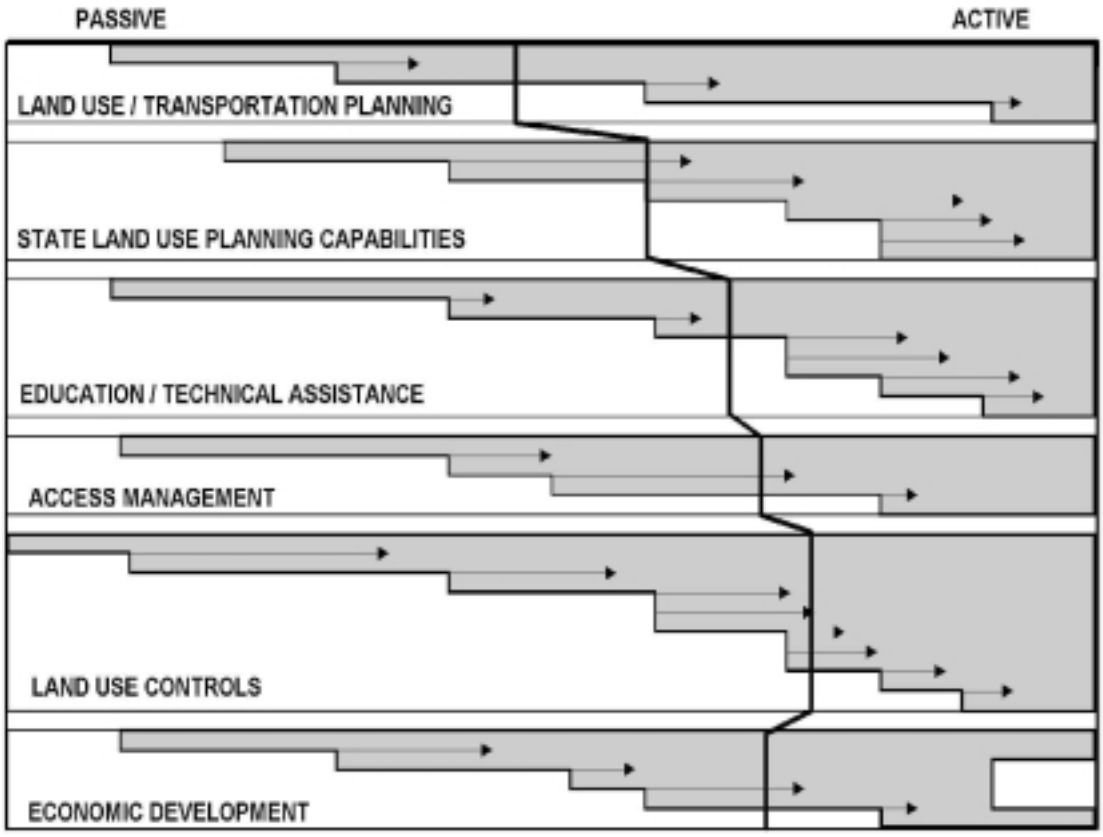

Figure 3

Conclusions

State DOTs participate in a wide variety of actions that relate to land use. These range from basic participation on task forces and committees to extensive programs of access management, education, technical analysis, land-use regulation, and economic development programs. States differ in their levels of participation and it is an area of evolving activity. In nearly all cases, state departments of transportation work in partnership with local government and state agencies. The charts presented are a way of understanding the scope of land-use activities of state DOTs and can be useful in helping a state can develop a balanced, rational approach to their policies and programs.

Acknowledgments

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YSELA LLORT, *Florida Department of Transportation*

One Size Never Fits All

Thank you all. I was one of the lucky ones that were on the marine highway and later on a 20-hour bus tour through some of the most beautiful land I have ever seen. That has led me to preface my statement by saying what I am going to be presenting today is really the outgrowth of a Florida issue and what you will be getting will be a Florida perspective. Some solutions and recommendations are good for Florida and maybe not necessarily for some of the other states.

After having seen so much of Alaska and seeing some of the land-use patterns and some of the transportation networks, it just makes me very conscious that one size never fits all, whether it is statewide, local, or federal planning.

What I am going to do today is, I am going to tell you about a committee that was put together in Florida in the last year. It was a legislative blue-ribbon committee of which I had the pleasure to serve as co-chair, which looked at the transportation and land-use interactions, roles, responsibilities and made recommendations to the legislature.

I am going to be covering a little bit of background, some of the key themes, some of the important recommendations, and some of the policy considerations that were put forth for our state; and I will try to elaborate how some of these are some national issues as well.

Now, let me give you a little background on Florida. Florida is a growth-management state. We like to think of ourselves really as a fourth-generation growth-management state, being that we have revised our growth-management legislation twice since it was originally written. The focus of the transportation and land-use committee that I am talking to you about today was to put forth recommendation for the legislature for another revision of our growth-management laws.

In Florida our state transportation plan has to be consistent and, in fact, has to help implement the state comprehensive plan. The Florida transportation plan is then thought of as one of the three translational plans of the state comprehensive plan, and we have to gauge the performance of the Florida transportation plan in that context.

It puts forth a very important concept for Florida, a concept of concurrency, which says that public facilities have to be put in place with land development. That is the very basic premise of growth management in Florida.

The legislative charge of the transportation and land-use committee was to evaluate the statutory provisions relating to land use and transportation, coordination, and planning issues, including community design. Included in the study were the roles of the institutions that plan and implement both the land-use and the transportation side of business, looking at concurrency on the state highways and then two very technical issues.

One of them was to evaluate levels with the methodologies currently being used, and the second technical issue was to look at what land-use impact-assessment tools can be used to project transportation needs.

The representation of the Transportation and Land-Use Study Committee was very broad based on the legislative committee. There were environmentalists, elected officials, development interests (as a matter of fact we had the largest developer in Florida included in the deliberation), government officials, business interests, and

citizens. As a matter of fact, every planning institution that you can imagine was represented, including those representing the transportation underserved, both economically disadvantaged and the elder population.

Let me talk a little bit about the report of the committee. I have a copy of the report and if you are interested in reading the report, it is on our website at www.dot.state.sl.us/planning. You will find not only the report I am talking about but an awful lot of interesting information on our website, and I hope you visit it.

The report looked at four areas:

- Chapter 1 dealt with the issues of better community design.
- Chapter 2 dealt with the whole business of concurrency. How do you truly evaluate a transportation system given the premise that the objectives of currency are sound?
- Chapter 3 looked at land-use impact and coordination. What are the coordination mechanisms and are they self-supporting or are they mutually exclusive? Those were done for the state, for the regional, for the local levels.
- Finally, there was a chapter looking at investment decisions in Florida's future and what it really takes in levels of funding to support sound transportation system in Florida.

One of the things that was important to this group because of the very varied interest was that the report be unanimously supported. And I have to tell you that was an interesting process to get to that. The reports that you see in here had the unanimous support of the entire group of participants. In order to do that, we used the Florida Consortium Resolution Center, which led us through a facilitated approach to reach consensus.

The following are the key themes or principles that the committee looked at. The first one was that Florida needed to have a truly multimodal planning and multimodal transportation system, particularly in urban areas. There was general dissatisfaction with the state of the practice and the multimodal approaches.

The state and the state institutions need to help local governments and support local government planning practices. The discussion started establishing changing roles for state institutions. There was a concern that local governments need to be given better tools to pursue their goals and the state needs to take a much more active role in providing best practices and coming up with technical training to help them in this endeavor.

Another general theme that ran through the whole deliberation was that regional mobility should not affect communities' livability. There was acknowledgment of the balancing act that exists between increasing mobility and, creating in Florida a place where people wanted to live and work and a place that could flourish. Somehow those often-competing interests needed to be self-supporting so that one would not detrimentally affect the other. Likewise, the institutions and the processes put in place for implementing both transportation planning and for land-use planning need to reinforce that cooperative synergy.

A third general theme that went through the process was that economic vitality required a truly well functioning transportation system and if Florida was to prosper, that needed to be a basic premise.

The final theme is a familiar one, that one size does not fit all. Florida is very diverse, and the process that the study committee would be recommending should be one that would enhance flexibility and would create planning options rather than creating a process that just had one solution for everybody.

In the area of mobility and livability conflict, there was the acknowledgment that frequent conflict between mobility and livability is at the heart of the land-use and transportation problems. And that, in fact, if we wanted to address this in some levels of recommendations, we needed to get to the root of this matter.

Let me switch from the principles to recommendations. There were 30 recommendations that came out of the deliberations. I will touch on a few. One recommendation was to create a smart community option within the concurrency process. The essence of that recommendation was as follows: certain local governments at their own initiative but with the approval of the state Department of Community Affairs would be allowed to have just tremendous flexibility in how they worked to develop both their land-use and transportation systems.

The only issues would be that for these smart community design concepts—whether it is a full city or part of a city or a neighborhood—to be approved they would have to have very measurable goals. Approval of the designation as a smart community would depend to a large extent on the development of the measurement of performance goals.

Presently there are very few measurement techniques that can be used in the transportation system that really account very well for whatever gains or losses there might be through different community design options. So the root of the matter here, then, became how do you create the technical tools that you need in order to help measure the goals of smart communities.

A second recommendation was to develop a system that would allow concurrency impacts to be evaluated multimodally as well as enable the evaluation of different urban design concepts. For example, if we had one community design that used a very traditional kind of layout in their area, you would be able to evaluate the transportation demand that would be created for different modes as well as how much of the demand would be satisfied by mode. This would be in contrast to primarily looking at highway level service, which is the current practice.

Let me say that in the discussions of getting concurrency right, there was the general dissatisfaction of how concurrency had been administered, but not of the value that concurrency served. Agreement with this statement required deliberation because we had a very strong participation by land developers and land-use attorneys who had concerns over the concept of concurrency since it tended to come straight out of their pocket. The argument became that tools needed to be used to gauge concurrency.

Other recommendations include many to do with methods of improving modeling techniques and data sharing, particularly between the MPOs and local governments.

Interestingly enough, the data-sharing recommendations have not been universally well received. Some of our MPOs are feeling uncomfortable with the sense that they and the local government need to use the same data sources used for land-use

planning as that used for transportation planning. It is kind of interesting to see this debate. Often recommendations that appear very sound and reasonable are quite difficult to implement.

Another recommendation of the committee was the topic of secondary and cumulative impacts. The committee made a recommendation that cumulative and secondary impacts were to be analyzed at the metropolitan level as part of the MPO's long-range planning process and, further, that some of this needed to be done at the comprehensive planning level by local governments rather than at the project development stage. This recommendation will require extensive review prior to implementation.

Finally, the committee made some very aggressive recommendations in terms of funding. This focused on a recognition that is if we are to be a community-based planning state, there is a need to make sure that important statewide facilities are fully funded because of the difficulty in funding these through a local mechanism. They made recommendations about how that could be done.

The study also makes recommendations about establishing financial incentive programs for local governments to do good planning. An additional recommendation establishes a program very similar to the federal TCSP program. This program would be named the Florida Transportation Committee Innovation Grants Program.

Many of the recommendations of the study committee were implemented into legislation this last session. Specifically, legislation created the multimodal transportation districts: DOT was asked to develop multimodal level-of-service standards and a mechanism for lowering the level of service on our highway system in urban areas was pushed. Interestingly enough, the latter is contingent on the DOT concurring with the drop of level of service. That last detail was very important to us.

A positive outcome of the committee was that there was a lot of trust built up between the parties representing different interests and the considerable learning and information exchange that took place. For example, the Florida Intrastate Highway System (FIHS) has always been a priority to the state. Often local governments see this priority differently. Through the study committee process it became publicly acknowledged that the FIHS was a system of key statewide interest and needed to have both funding as well as operational priority.

Where are we now? The Florida DOT and the Florida Department of Community Affairs have been asked by the legislature to take the next step. This would entail taking the committees' recommendations and the legislative action that occurred in the last session and developing legislative recommendations that would hopefully be put into law during the 2000 session. This is particularly important since we have had a gubernatorial change since the study committee report was released. It is important that the legislative recommendations be supportive of the new administration's action agenda.

Then, finally, let me talk a little bit about the policy issues for us in the state. Definitely, this increasing issue of balancing statewide mobility and community desires is a difficult issue for us at the DOT. It is a difficult issue because it requires us looking at transportation very differently. We have in Florida certainly come a long way in doing this, but basically it requires the DOT to much more aggressively support local governments while focusing on a few statewide priorities.

It requires us to look at all our policies and regulations and develop ways to can do this. The technical and best-practices focus that the committee recommends is going to require us to shift resources from doing to supporting, from doing to training, from doing to measuring the performance of what the local governments are doing.

It is definitely a shift. It asks us to do a lot of performance-based resource allocation. We don't have the mechanisms to do that yet. As a matter of fact, we have state law that you shall divide up your money through some statutory formula. So, we are going to have to figure out how to change those state laws to create pots of money that can allow us to give some options to local governments that are doing the right thing whenever that gets defined.

So, in closing, I would say that, at least for us, it requires a very changed role for the state. Stay tuned because as we progress through this, we will be developing some new tools to measure more complex policies.

CHARLES HOWARD, *Washington State Department of Transportation*

My talk is about a project that that we have entitled "Reinventing NEPA." I want to preface this with three aspects of incorporating environment analysis, or at least moving toward heightened environmental analysis, in our statewide planning process that we are pursuing. The first is that we are updating our state transportation plan. As part of that, we have developed a vision that we call "Livable Future for Washington," and that has three components: vibrant communities, a vital economy, and a sustainable environment. We have integrated the concerns of a sustainable future within environmental concerns as a major outcome that we are trying to achieve with our state transportation plan.

The second level is we are actively developing GIS data on environmental resources as data input into our planning process so that we can fully analyze potential environmental impacts of transportation proposals. We need the data resources to know when there is likely to be an environmental impact and we can integrate that analysis.

The third is the "reinventing NEPA process" that I would like to talk about. This means basically taking the NEPA analysis and doing NEPA in a corridor planning sense.

We are changing the way we make transportation decisions, and this is part of a national initiative. We were converted by FHWA a few years ago. They lectured us about doing tiered environmental documents and lectured us that that was the wrong thing to do, that we weren't using those correctly. They actually started focusing us on transportation decision making; what decisions we were making and what level of analysis was appropriate for each decision. We really started to rethink the way we were approaching doing our environmental analysis and how we made decisions. We put together a statewide process improvement team to look at our environmental analysis and our transportation decision-making structure.

Right now we are implementing a prototype of a new process that is going to be tested. We are testing the process on State Route 104 and on two other corridor studies, one of which is a major metropolitan freeway corridor analysis. Figure 1 explains where we used to be in the decision-making process. We have the chain of events of adopting policies, identifying needs, choosing strategies and solutions. Those three really are the traditional planning process.

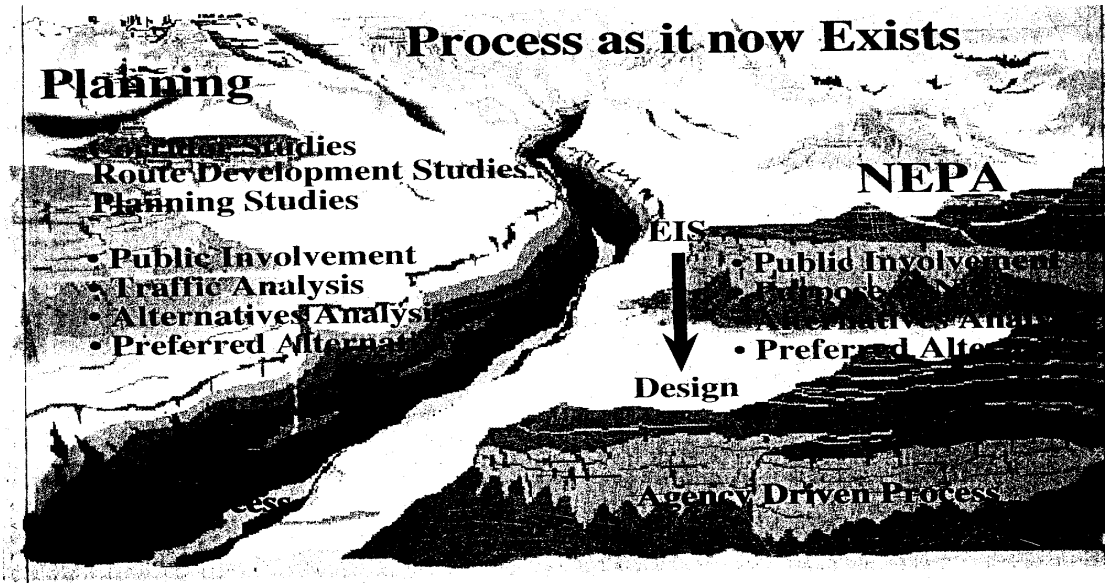

Figure 1

We have a funding mechanism, a programming process, and then we build something. We always did the NEPA analysis right there between funding and build a project because we didn't actually do NEPA until we have some money to do the project.

So what is wrong with this process? This is a graphic illustration of the kind of Grand Canyon between this planning process and our NEPA process and our design process. There wasn't much interaction on either side of that. The planning side we have always done public involvement, traffic analysis, alternatives analysis, and developed a preferred alternative.

That process was largely local government driven. We really partnered with and integrated local government into that decision-making process. Then nothing transferred across except maybe a concept that came across for a project and we redid the whole thing when we got to the EIS and we got some money to do something.

So, we basically were recreating the wheel doing public involvement, establishing purpose and need, doing alternative analysis and coming up again with the preferred alternative for the second, at least the second time, but that process was federal resource agency driven largely to meet the NEPA requirements. We had two separate processes to basically do the same thing.

So, what is wrong with this? There was a perception out there, and to tell you the truth, it was more than a perception, and we will readily 'fess up to this that we have predetermined decisions. When we entered the NEPA process, we already had a project funded. So it does not take a rocket scientist to figure out that we had already made a decision about what it was we were going to do.

The problem is that the decision making was back in the planning process. We had already gone through a full analysis. We had already involved the public. We chose the preferred alternative. We got something funded and then we backed up and pretended like we didn't and we entered the NEPA process. Now, everybody is sitting around the table probably looking at their shoes realizing that is probably what we all do. I am the only one brave enough to admit it. But that really was a perception that was out there—we were making predetermined decisions.

The resource agencies were totally cut out of the planning process and didn't recognize any of it that had occurred. What was interesting was that the FHWA also in their project development process was totally cut out because there wasn't much of a connection between the FHWA-mandated planning process and the FHWA project-development process. So, they also had the same disconnect.

Our processes were looked at as inefficient and duplicative. We would go out to communities and work with communities on alternatives. We would come up with a preferred alternative. The people who weren't impacted by that decision were grateful that they weren't impacted by it. All of a sudden we were back out with the same alternatives in an EIS that impacted them and they are saying what is wrong with DOT.

So, we also had bad public relations. The focus was on the process and not the decisions being made; too much detail for the decision being made. We would do basically permit-level detail to make corridor-level decisions. And the environmental issues were really too late. We weren't doing the environment any favor by doing this late in the process. Some of the consequences were increased cost, obviously; delays in project delivery. Those are some of the things that we wanted to attack.

The new decision-making process that we are trying has moved the NEPA process up into the two strategies and solutions phase of project development so that we are actually doing NEPA, which is a decision-making process, at the time that we are making the decisions.

Now, those of you who have been involved in this process probably realize that there are a lot of problems with this. How do you make sure that the decision sticks, especially when you are going to be funding and building not one project but many projects over a long period of time? How do you make sure that you are making one decision and we are struggling with those issues?

Some of the process improvement objectives are shown in Figure 2.

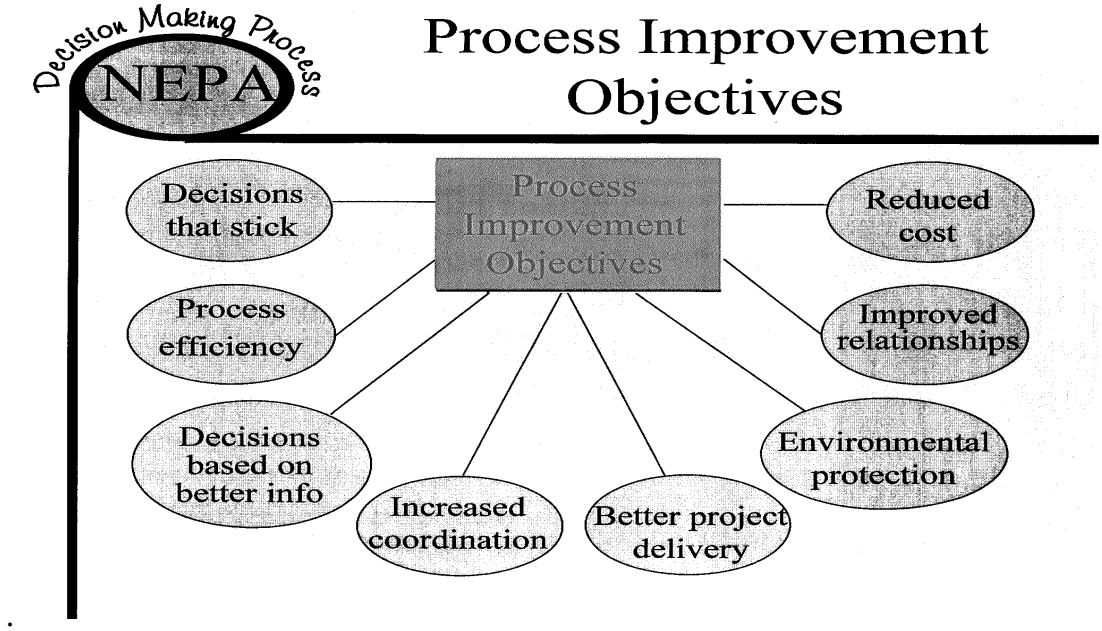

Figure 2

Figure 3 shows our transition decision-making process structure. It was easy to understand for those people who are involved in planning. It was very interesting, though, because our environmental side just wasn't used to structures like this, where we had transportation decision makers. We had some type of steering committee that brought the interests together. That never happened in our project development process before, but it always happened in our planning process. So it was kind of an interesting fusion here. The resource agency group was never involved in our planning decisions. They don't have time. And that is another problem we are still struggling with. They just don't have time to participate in those decisions, but we are trying to take care of that.

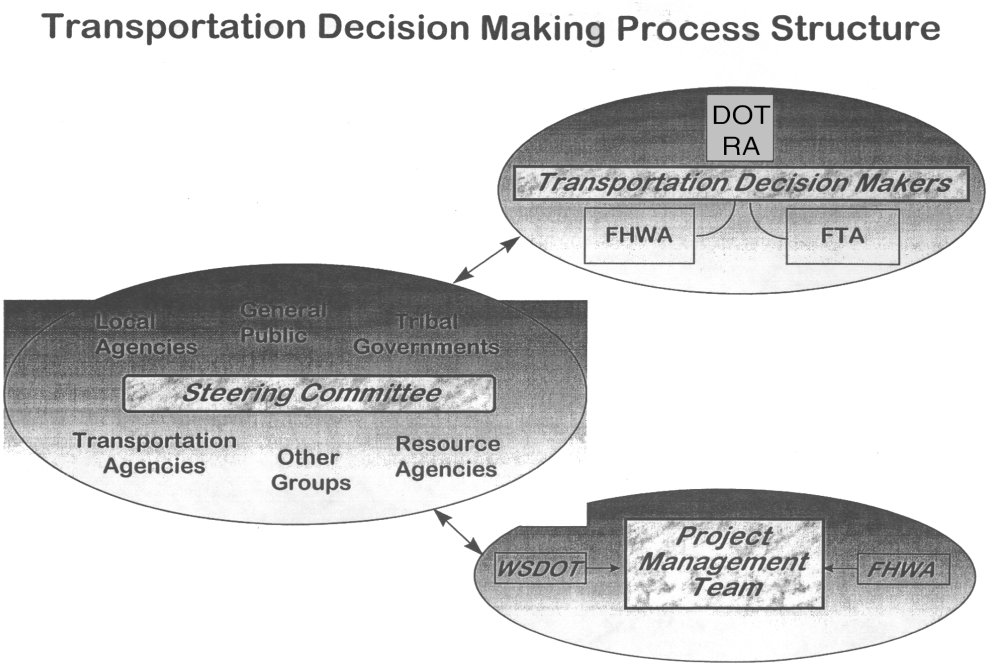

Figure 3

Another interesting thing about that is having local agencies, often represented by local elected officials, sitting with resource agencies; and that is a very interesting mix that is taking place there. For an I-405 corridor study, we have a King County executive, who was elected by the 1.5 million people of King County, sitting with some GS-11 from the EPA, who is given the regulatory authority over this, and that is a very interesting mix.

The federal resource agencies largely disrespect local government and local decision making because they have never really had to work with that group. They have always viewed them as part of the enemy and part of making the bad decisions. So, we will see how that works. We have a project-management team at DOT that supports the effort.

The consensus points we have worked into this process are shown in Figure 4. Basically, at every step in the traditional planning process this group will reach consensus on the key points. We have structured it so that this group has to move forward or the process doesn't move forward.

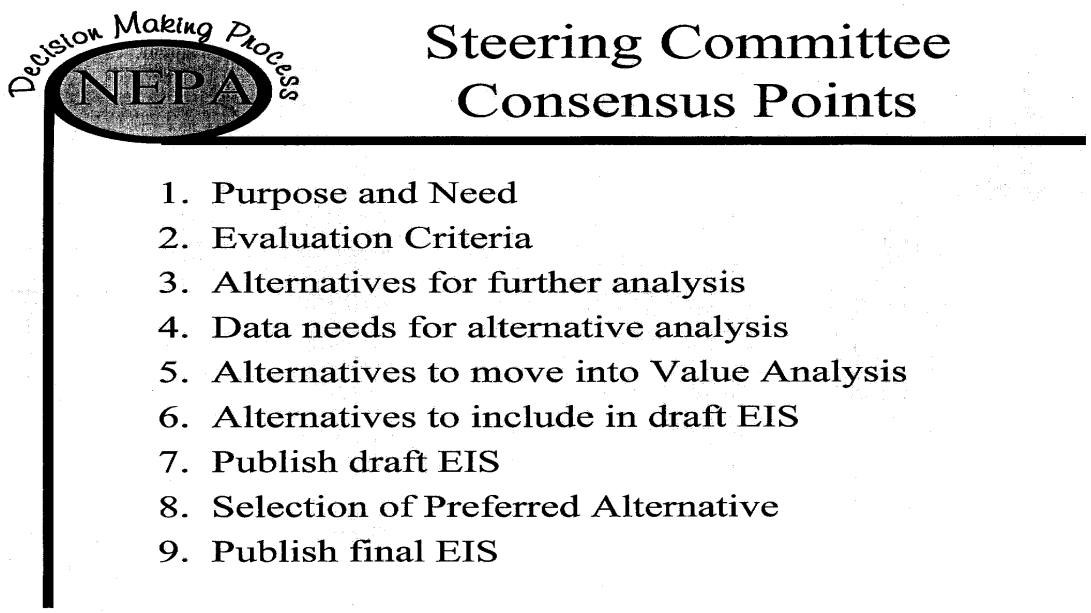

Figure 4

This issue of agencies with jurisdiction was a totally foreign term to the planning world but was a very important one in the NEPA world. Who are they and who has a regulatory responsibility that can stop a project is shown in Figure 5. They provide input concerning regulatory requirements into the process, but, more important, they provide written concurrence.

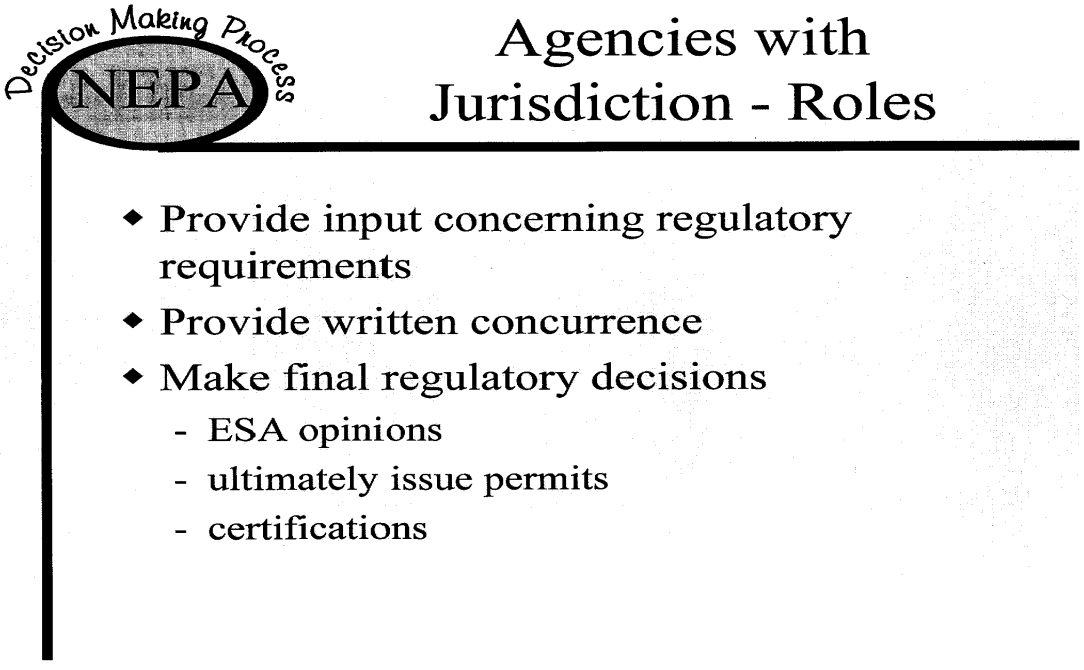

Figure 5

Our project-management team is another place where we have brought DOT and FHWA together on managing these projects. The planning, design, environmental, and maintenance disciplines are all involved in each one of these projects. We are staffing the steering committee and doing the staff work so that it is a team type of delivery.

What we are really moving toward here is the record of decision from FHWA or FTA, as the case may be, and what we are saying is that the NEPA process is complete unless new significant information is found. At the end of a corridor planning process, we will have a record of decision that allows FHWA to make a location decision. We are going to be working toward implementing that preferred alternative as opposed to second guessing that later on the project development phase.

Then after the EIS is completed, the need for principles still apply. That was an important part of this, because it says that there is a need for procedural requirements and a need for principles so the principles of public involvement and alternatives and all that still apply. We are going to still have quite a bit of public involvement. The permits, then, are still going to be at a later stage, applied for and issued prior to construction. There might be some more detailed environmental analysis that is needed. It is outside of the NEPA process though. It is specifically done to meet the requirements of the permits. Obviously, we are going to implement the environmental commitments.

This new process is going to be used for major transportation projects statewide. We don't imagine that this is going to be used for every project. As part of the national initiative, we are going to try to promote this process nationally, assuming that it meets with some type of success.

There are a number of issues that come from this change. First of all, all the participants in this process—including Washington state DOT staff, FHWA, and the resource agencies—really struggle with this new streamlined way of thinking about NEPA. Everybody is so ingrained in the previous process and documented approach to NEPA that they just can't get out of that way of thinking.

Even those of us who have been involved in the process improvement effort still backslide all the time because we just can't think of NEPA being anything different than what it has been. So, that is the real sticking point.

Another issue is that this decision focus is a very difficult concept for people to understand. We tried to get FHWA, the local division office, to define for us at the beginning what decision they are making because you have to know what decision it is in order to know what level of detail you are going to do the analysis in. Nobody knows anymore what decision they are making because the NEPA process has been so focused on getting as much detail as possible that we have lost all connection between what is needed to make the decision and what we actually produce.

The mix of these local agencies, especially elected officials and resource agencies, is pretty interesting. As I have said, we have had a GS-11 at the EPA doing major stump speeches to local governments. You just don't know how to do good land-use planning. So, we just lock them in a room and, hopefully, they will come up with a consensus sometime.

But that is a real tough dynamic. What is good about that is they are forced to share viewpoints that they have never shared before. The local governments have to recognize there are legitimate federal regulatory issues out there, which local

governments often totally ignore. But the bad part is the governance issues and who is in charge.

The lack of definition of what occurs after the record of decision is really a problem. We haven't thought through exactly what that is. How good is this corridor level EIS? How long is it good for? And what happens and what is the exact process that you implement projects off of it?

One of the things that has been pointed out is that the NEPA process is a little too rigid for the planning participants because one thing we have done is to meet all the requirements of the NEPA process in this planning process. We have adopted the NEPA format for this so we make sure that we have procedurally met all the requirements.

I have presented the concepts of what we are trying to do and that we have actually just started three pilot projects of different complexities. One of them is a fairly easy issue that probably won't involve much widening. One is a fairly long corridor that might involve some eventual widening of a highway corridor and the other one is a very complicated interstate corridor study that is kind of the major north-south corridor in the high-tech corridor east of King County.

JANET MYERS, *Maine Department of Transportation*

Involving the Public in Transportation Planning

Maine is doing a process very similar to what Washington is doing, but obviously, at a much different scale, having a much smaller population. Some of our problems are a little bit different in terms of the level of documents that we are dealing with under NEPA. However, a lot of the problems are the same. A lot of the issues that we have run into are the same, and the process we are going through to reinvent how we do our planning and project development work is very, very similar.

We, too, I will confess, are a state that started out with a solution in mind and then went out to the public and said "How do you like it?" Then only at the end would we go to the regulatory agencies and try to get a permit for it. We had a lot of trouble with that over time because what we found was the public frequently hated it. The regulatory agencies resented it, and we would end up with a project at an impasse, going nowhere fast and costing us a lot of money.

Finding the underlying problems wasn't too difficult. The two major ones that I will touch on are, first, the lack of public participation prior to making a commitment within DOT. Nobody likes to be told by a centralized process that the government has made up its mind what it wants to do. The second problem is that, institutionally, environment and environmental protection really were considered a compliance issue to be dealt with in project development. They were never viewed as operational or a business ethic. They were never considered at the planning phase and that obviously creates some problems if a lot of what you are doing has some potentially major effects.

We were impacted by the changing environment politically and in terms of the regulatory agencies and their level of activity and enforcement in the late eighties and early nineties. A lot of things came together in that time period of the late eighties and early nineties that pushed for change for us.

One force of change was the experience of having a lot of dead-end projects. The second was the passage of ISTEA and the change in terms of the kinds of planning processes and public participation and intermodalism that we are all experiencing.

A big force of change during that time period and continuing to today is the efforts from the FHWA to really try to get the federal agencies to sort out the problems with NEPA and how that whole process was working. The effort included how the Clean Water Act Administration was going as well.

In Maine, the biggest force for change was the passage of a statewide referendum in 1991, known as the Sensible Transportation Policy Act (STPA). The act really fundamentally changed, at least on paper, how we plan and perform our transportation projects.

The referendum was an outgrowth of the battle over whether to widen the Maine Turnpike. For anybody who has been to Maine, you know that the only way in and out if you have got any sense is the turnpike and it has some real limits on capacity.

The planning language was added to that referendum in the hopes of attracting support from people who may not have cared about the turnpike but who were beginning to worry about what the state was turning into as a result of a lot of growth and pressure from the mid-eighties. So, the planning provisions that went into the referendum and ultimately then were translated into implementing regulations included a number of components.

First of all, it established some policies that all of the transportation activities in the state, both from Maine DOT and from the Maine Turnpike Authority, have to comply with. Included among those and relevant to the topic today is the promotion of alternatives to new highway capacity. This is a very strong theme in the act and in the regulations that support the act.

We are also required to be consistent with local land use and comprehensive plans. There is some implementing language that requires us to work with the communities to make sure that our projects will, in fact, be consistent. A third area of major significance is that the department was charged with making sure that the effects on the environment, and this includes both the human and the natural environment, were minimized from its activities.

Another component was a new public participation requirement and the STPA went far beyond NEPA in that sense. We now use regional transportation advisory committees to help generate plans that we use in preparing our statewide plans both for the 20-year plans and for our shorter-term plans. We use public participation in developing our plans for major projects at the planning phase through a public advisory committee. These committees start at the very initiation of a concept and stay with the ideas until they are developed all the way through project development. We found that really facilitates the ability to get a project not just through a community but also to have regulatory agencies support the project as well.

Another component under the STPA is the State Transportation Planning Requirements. We are required under state law now to do a 10-year plan as a minimum horizon and also to do a 2-year capital program as well.

The statute and the regulations set out two other items that are of importance. One is that it provides specific procedures for us to follow if a project is either considered a

significant highway project, which means that it adds highway capacity, such as a new lane or as a bypass.

We also have to have some specific procedures if a project is what is considered a significant public interest project and, obviously, that language is pretty vague and it can mean almost anything. To date, though, we haven't had a lot of problem with it primarily because our public participation program both in planning and project development is so broad that I think the original concern that drove the language in the regulations has pretty much dissipated.

Maine DOT had a choice after the passage of the STPA, and that was whether to embrace this change or to fight it. We were fortunate that under the commissioner at the time, Dana Connors, there was a choice made that we would embrace it. We reached out to all of the interested stakeholders and went through a negotiated rule-making process that required consensus. Under our current commissioner, John Melrose, we have expanded that to a broad commitment to the environmental process changes very similar to those in the state of Washington. We are doing that under the auspices of an initiative called Integrated Transportation Decision-Making.

I wanted to give you today just a few of the changes that we have already implemented through these two events and then also some things that we are looking forward to working on now. I mentioned that under the STPA we use a regional transportation advisory council. There is one in each of the seven geographic areas that Maine uses for its maintenance divisions.

We also have advisory committees for freight transportation and for passenger transportation and they help create statewide plans for both of those subject areas. And, again, we use the public advisory committees on a very wide-scale basis to make sure that we understand what concerns and impacts may be affiliated with a particular effort.

We have moved up in the planning process our initial evaluation of potential impacts of our programs and projects. We use this interdisciplinary team not just for the major projects that might require an EA or an EIS but also for more mundane projects, such as our highway improvement programs and some of our paving projects. That is because our experience has been that you can have some fairly significant impacts from what appears on the surface to be fairly minor work. As an example, in my jurisdiction to supervise the utility section, we find that we have major community issues because of the clearing required to relocate utilities.

Those cradle-to-grave interdisciplinary teams have worked really well to help us identify potential impacts and they also do the field reviews that are necessary to expedite the planning and the initial project development process.

Another piece that we have implemented is the use of a 6-year plan as a kind of an interim step between our 20-year plan and our 2-year funding plan. This is the first time we have been able to have a situation where we could look out and in a longer time scale know what our priorities are, let communities and individuals have the opportunity to comment on the proposed priorities and the work that will be coming up in the next 6 years, and to really help us formulate what we want to do.

We have found that that kind of input really does link to how successful you are in avoiding different kinds of impacts that are listed under NEPA.

Probably one of the biggest steps for us has been to start requiring that every project have a purpose and need developed for it at the beginning. We now do that in planning.

It has been interesting how quickly—particularly the younger staff—members have adapted to this. They actually find it helpful, as you might expect to know what they are doing and why they are doing it. It does sound simple, but it does help, and what we find is it begins to eliminate a lot of the confusion at the front end. When you are dealing with the front office and the politicians, starting to sort out the purpose and need early on is really helpful.

We are still working on a number of initiatives under the ITD. We are moving NEPA and STPA in terms of the processes and the documentation. Those, for whatever reason, had grown up since the early nineties as two separate things, partly because NEPA was always housed late in project development whereas STPA was viewed as a planning responsibility. We are also making sure that we do everything we can to start NEPA earlier, both in terms of defining purpose and need and also beginning the documentation of our decision-making process early so that we can follow that and people can share it instead of trying to reconstruct it down the road.

We are really looking at trying to integrate with MPOs and municipalities in a better way and make sure that their work doesn't get duplicated later. We are looking at having some supervisory structure so that they actually can perform some of the NEPA and STPA work for us. We are working on the concurrent points with federal and state agencies, and this was brought up earlier. We are really hoping that we will be able to get them to agree to make decisions at the front end and stick with those barring unforeseen information or new conditions. We are just beginning the process of talking with them about that, so it is a little too early to predict what will happen.

Finally—and this is another kind of practical thing, but it seems to be a big one—we are working on the universal database for project management that actually will start in planning and go all the way through project development and into maintenance. Up to now, all of our databases have been separate and it has been very hard to follow a project history or to have any sense of why decisions were made or what impacts were involved.

There are some pitfalls and challenges. Everybody thinks there is too much process and they don't want any more and this whole effort sounds like it is going to create more instead of less. So, we are hoping to defy people's expectations.

The nature of cultural change is very tenuous. It is very easy for people to say, "Yes, I can do something new" until the first political project hits the boards and then they all want to go back to the old ways of doing things.

We do need a financial structure that will move funding more easily back into planning. We have been fortunate. Our FHWA division office has pretty much said you guys figure out how you want to run the process and we will figure out how to help you fund it, so we are hoping they will make good on that.

We do need buy-in from outsiders and we need to do a lot of education and training and that is probably the biggest piece, both internally and externally. We are hoping to start some of the internal training later this year and then move to training some of our external partners after that.

Finally, just trying to maintain support for environmental policy over time is, obviously, a challenge for the same reasons I mentioned earlier.

SUMMARY OF DISCUSSION

Several points were raised during the general discussion with the audience:

- The group identified a number of states that were active in state land-use/growth-management issues: Maryland, Oregon, Florida, Pennsylvania, Tennessee, Montana, New Mexico, Colorado, Delaware, New Hampshire, and Wisconsin.
- Moving NEPA concerns, including corridor location, purpose, and need up into the planning process is consistent with the original intent of NEPA.
- The lack of a funding commitment for a project at the planning stage is not much different than the current practice where funding may not be totally committed at the NEPA/project-development stage.

SUMMARY OF WORKSHOPS

Summary of Issues

- Environmental issues tended to center around streamlining the NEPA process.
- Most support the need to move concurrence early in the corridor planning process. Key questions were: How can you get concurrence earlier in the process? How can you be sure the work will not have to be redone?
- There is a great deal of skepticism around on that particular issue, and it is going to take a lot of hard work to get it done.
- Two major issues under land use and transportation:
    1. How do land use and transportation really interact. This is a question of tools and techniques of modeling that we are not very good at yet?
    2. How can land-use and transportation policy interact to create or encourage smart growth? This is primarily a question of policy or process implementation.
- The process of coordinating transportation and environmental policy and transportation and land-use policy may be disconnected. Marrying those two is more than just policy perspective. It is making the calendars line up a little bit.
- Mobility and the role of state DOTs is primarily statewide, while land use is under local control. Again, how do you bring those processes together?

Suggested Research Topics

Environmental Streamlining

- How do you get resource information across all agencies?
- We need ex post facto studies of urban travel models. Do they really work?
- Economic analysis that puts cost on all factors shows promise at the corridor level and should be pursued at the environmental planning stage.

- How we can quantify secondary and cumulative impacts in statewide transportation planning?
- Performance standards, performance measures, data regarding sustainability and mobility are needed.
- What are the effective models and/or techniques of addressing the institutional and process side of earlier integration and environmental considerations in investment decisions?
- Conflict-resolution techniques: How you resolve conflicts; How you build those into process.
- Interjurisdictional cooperation: How to include the public in statewide planning.

Land-Use and Transportation

- We need statewide modeling that incorporates economics and the environment.
- Model strategies for linking existing land-use controls to statewide transportation planning and management techniques: What land-use controls and policies actually work? What transportation policies affect land use? What land-use policies affect transportation, and can we quantify it?
- What are the urban design impacts on accessibility and mobility?
- Research is needed on the relative contribution of travel strategies compared to other public policy and infrastructure factors. Transportation is one factor. How does it fit among sewer, water, and other policy factors in terms of its influence, and how do you incorporate land use in statewide planning given this primarily becomes a local issue?

Organizational Change

- How we institute the kind of cultural organizational changes that do look at land use and environment earlier, take those things seriously. There also has to be cultural change on the resource agency side, and what is our contribution to that? How can we encourage that sort of change that leads toward more partnership on the resource agency side?

Finally, and I want to emphasize this because I heard it numerous times, “peer review on statewide multimodal planning has been very helpful. We have helped each other learn as we go along.” Peer review should be applied to environmental streamlining, land-use and transportation planning processes and how states are doing with the organizational changes necessary to move forward in both areas.