

Department of
Transportation

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- 3 Adopt a context-sensitive approach for all state transportation projects
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- 5 Adopt a “Complete Streets” policy
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States with balanced transportation systems give their citizens better mobility and more choices. Transportation systems that are designed for multiple modes improve traffic flow, preserve community character, increase transit use, and support walking and bicycling. In this section, we describe how to create transportation networks that are integrated with the community and accommodate multiple modes of transportation, including pedestrian, bicycling, and transit. These networks balance safety, mobility, accessibility, community, and environmental goals. They also help governments avoid costs associated with protracted public battles over controversial projects.

1

Adopt an overall strategic plan**ACTION**

State departments of transportation play a critical role in how cities and towns grow and develop, and where stores and residences, sports stadiums and manufacturing plants, and every other imaginable type of land use is located. How people travel from place to place influences what is built and where. As a result, state transportation departments should develop strategic approaches that encourage creation and maintenance of a balanced transportation system, offering residents and businesses a variety of transportation choices. In doing so, state transportation plans should take into consideration the State's fiscal capacity to provide the types of projects envisioned in the plan; the potential effects of transportation projects on air and water quality and other environmental resources; how transportation projects meet the long-range residential and economic development goals of their state; and how they can assure that specific projects fit the context and scale of the communities they are designed to serve.

PROCESS

Although state departments of transportation are already required under federal law to develop long-range transportation plans, requirements for what should be included in such plans are minimal. As a result, some states produce thick, detailed documents about every aspect of their transportation planning for the future, while others produce thinner, more conceptual plans. The Federal Highway Administration says state long range transportation plans generally fall into six categories or combinations of these categories: needs-based plans; vision-based plans; policy plans; project-based plans; corridor plans; and fiscally realistic plans.

Whatever the approach, transportation planners should fully integrate their work with state and local land use and environmental protection plans. State transportation agencies are uniquely situated to assess and address regional (if not statewide) transportation needs. To do so, planning must assess each project's effect on air quality; understand the effect specific projects will have on local plans for future growth and development; and whether transportation or other infrastructure can be built on a timetable consistent with the construction of new residential developments or redevelopment of older communities. Departments of transportation should be prepared to provide technical assistance and training,

demonstrate effective land use planning examples, or do other work with local governments that may not have the planning capacity to effectively link transportation improvements with preferred development patterns. To the extent possible, state and local governments should strive to understand both the anticipated and potential unintended costs of transportation project decision-making.

EXAMPLES**Oregon Transportation Planning Rule**

The Oregon Transportation Planning Rule implements state land use planning goals for transportation. This program includes targets for reduction of vehicle miles traveled (VMT), which is important to efforts to reduce greenhouse gases. The rule also requires local governments to evaluate the impact of land use plan amendments on existing or planned transportation facilities, and it sets minimum guidelines for performance of roadway systems. The Oregon Department of Transportation must provide findings that its projects are consistent with local land use plans.

Oregon's Transportation Planning Rule: <http://www.oregon.gov/ODOT/TD/TP/TPR.shtml>

Florida's Transportation Concurrency Requirements

The State of Florida has put in place a growth management strategy that is designed to ensure that transportation facilities and services are in place concurrent with the impacts from planned development. To implement this measure, local governments must determine the appropriate level of service for transportation facilities and whether the impact of proposed development will exceed existing capacity. If adequate capacity is not available, developers must either provide the additional capacity, pay an amount toward the required improvements, or wait for government to build the necessary facilities.

Florida's Transportation Concurrency Requirements: <http://www.dca.state.fl.us/fdcp/dcp/publications/TCBP.pdf>

New Jersey's Transit-Oriented Development Program

The State of New Jersey has fully embraced the concept of transit-oriented development (TOD). In addition to transit-friendly policies, the state's department of transportation has developed a handbook on "transit

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friendly land use" for New Jersey communities; developed a transit-oriented development pilot program as well as a transit villages program; a joint development program with the private sector; and a program designed to help home buyers qualify for a mortgage based, in part, on savings on transportation costs from living near transit stations.

New Jersey Transit: <http://www.njtransit.com/>

2

Adopt a "fix-it-first" approach

ACTION

States should employ a fix-it-first approach to transportation investment. Departments of transportation should ensure that preventive maintenance and repair of existing roads are the highest priority for spending. This approach reduces maintenance costs later, supports business and residential investment in areas already served by transportation infrastructure, and creates jobs. Nationwide, about two-thirds of state transportation funds are spent on the construction of new roads. Meanwhile, about half of our existing roads and bridges show signs of poor maintenance. A fix-it-first policy can begin to correct this imbalance.

Moreover, the bias toward building highways to provide new capacity encourages growth in undeveloped areas rather than in existing centers and corridors. This induced development on parcels near new roads increases travel. In turn, this leads to a failure of new capacity to actually reduce traffic congestion and increases harmful vehicle emissions. Additionally, new roads will eventually need to be maintained, adding to the existing maintenance backlog.

PROCESS

States should begin the process of moving to a fix-it-first policy by making a realistic inventory of existing road and bridge conditions. If inventories already exist, they should be re-examined to verify that current conditions are accurately reflected. Based on this inventory, the State should develop a plan for preventive maintenance employing an asset management approach. Minimizing long-term costs to taxpayers and inconvenience to motorists should be goals. Targets for reducing maintenance and repair backlog should be developed and the most heavily traveled routes should be focused on first. By canceling new construction that does not

pass a performance efficiency test and delaying other low-priority projects, states can help pay for this shift in policy. States should set a target date for bringing state roads and highways up to good condition or set targets for the proportion of transportation that will be spent on maintenance or system preservation.

EXAMPLE

New Jersey's "Fix-it-First" Program

The New Jersey legislature first issued a "fix-it-first" mandate as part of the 2000 Transportation Trust Fund reauthorization. This mandate gave the New Jersey Department of Transportation five years to reduce the amount of deteriorated infrastructure by half. Governor Jim McGreevey's 2003 Executive Order directed the New Jersey transportation agencies to expedite "fix-it-first" projects. New Jersey's Future in Transportation initiative, a collaboration of the New Jersey Department of Transportation, the Office of Smart Growth, and other state agencies, endorsed "fix-it-first". Outcomes have included livelier Main Streets, more sensible land use, streets that meet community needs, more transportation options, and lasting returns on investment of taxpayer dollars.

New Jersey's Future in Transportation initiative: <http://www.state.nj.us/transportation/works/njfit/links/faq.shtm>

3

Adopt a context-sensitive approach for all state transportation projects

ACTION

The State should establish context-sensitive solutions as the standard approach to all transportation projects funded by it or within its jurisdiction. Context-sensitive solutions emphasize the role of streets as a part of the community rather than just as conduits for moving cars. This approach is also a way of doing business that begins with long-range planning and is carried through project implementation. It encourages transportation engineers to use creativity and flexibility in project design. Innovative examples from around the country demonstrate how such an approach to designing transportation projects can improve traffic flow while preserving community character and supporting walkable places that are more easily served by transit.

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Additionally, experience in states that employ context-sensitive solutions illustrates how such an approach can produce projects that are embraced rather than fought by communities. By avoiding the costs associated with long delays, aborted projects, and bitter public battles, a context-sensitive approach can help states more effectively use limited transportation funds.

PROCESS

Context-sensitive solutions represent a fundamental shift in the way most state departments of transportation do business. Producing results therefore requires sustained leadership from senior-level officials. New guidance might be required to change current practices and existing design standards may need to be revised, although in most instances the desired results can be obtained within existing standards.

To effectively change the direction of a state transportation department, career professionals within the department may need training to help them develop more creative and flexible ways to apply their engineering expertise. Additional staff with expertise in urban design, land use planning, public involvement, and related fields may also need to be hired and integrated into project teams.

A successful context-sensitive process:

- balances safety, mobility, community, and environmental goals in all projects;
- involves the public and affected agencies early and continuously;
- uses an interdisciplinary team tailored to project needs;
- addresses all modes of travel;
- applies flexibility inherent in design standards; and
- incorporates aesthetics as an integral part of good design.

EXAMPLES

Caltrans' Context-Sensitive Solutions

Context-sensitive solutions are ingrained in how the California Department of Transportation (Caltrans) does business. The agency was able to do this through a collection of policies, directives, guidance documents, funding mechanisms, and training programs committed to context-sensitive solutions. California's CSS initiative fosters early and continuous collaboration with stakeholders, balances transportation needs and community values, and promotes interconnected, multi-modal transportation systems.

Caltrans: <http://www.dot.ca.gov/>

Massachusetts Executive Office of Transportation

In 2003, the Executive Office of Transportation and Massachusetts Highway Department launched a three-year initiative to make sweeping changes to its project development and design process and incorporate context-sensitive solutions into its day-to-day decision-making process. With the help of outside community groups, the agency completely overhauled its Highway Design Manual to ensure that projects will be more compatible with the state's rich historic, environmental, community, and cultural resources. The guidebook has significantly more flexible design standards, is strongly multi-modal, explicitly incorporates community setting as a design factor, dramatically reshapes the project development process, and supports early planning and coordination with all stakeholders to create safe, attractive roads.

Massachusetts Executive Office of Transportation: <http://www.eot.state.ma.us/>

Maryland's Thinking Beyond the Pavement Program

The Maryland Department of Transportation's Thinking Beyond the Pavement program (TBTP) is used to direct the implementation of context-sensitive design principles in Maryland. Past successes of the TBTP program include training citizens and other stakeholders in context-sensitive design at a two-day implementation workshop, and compiling work plans for TBTP task teams and sub teams. State transportation officials believe the program improved internal and external communication during project planning, design, and construction. They also found that the flexibility of context-sensitive design has improved the consistency of project quality.

Maryland State Highway Administration: <http://www.sha.state.md.us/>

4

Take advantage of flexible federal transportation funding

ACTION

In recent years, states have been granted much more flexible use of federal transportation funding, yet many states have not tapped into this resource as effectively as they could. States demanded funding flexibility and got

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it in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) and subsequent federal transportation reauthorization laws. Federal transportation investment programs are now largely mode-neutral and offer states vast flexibility to use funds for non-highway projects. States should become more aggressive in using these sources of funds to help improve the relationship between transportation projects and land use.

PROCESS

For example, all Surface Transportation Program funds (approximately \$33 billion under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users legislation, or "SAFETEA-LU") can be "flexed" for use on transit or "complete street" projects that simultaneously provide facilities for cars, transit, pedestrians, and bicyclists. At least 50 percent of funding through the National Highway System (\$31 billion under SAFETEA-LU) can be shifted to the Surface Transportation Program and, with U.S. Department of Transportation approval, a full 100 % could be shifted to that program. National Highway System funds can also be used for transit improvements in National Highway System corridors. Similarly, up to 50 percent of Interstate Maintenance funds (\$25 billion under SAFETEA-LU) can be shifted to the Surface Transportation Program. Highway Safety Program funds (\$5 billion under SAFETEA-LU) can be used to provide safety improvements not only for motorists, but also for pedestrians and bicyclists.

States may also use federal Congestion Mitigation and Air Quality (CMAQ) funding to support smarter growth projects. A portion of federal transportation funding is reserved for projects in air quality non-attainment areas through the CMAQ program (\$9 billion under SAFETEA-LU). Established in 1991 and reauthorized in 1997 and 2005, CMAQ provides critical support for transportation projects such as maintenance and improvement of public transportation and alternative fuel programs that reduce vehicle travel or traffic congestion. In the past, all CMAQ funds have not been used, and an opportunity exists to expand the use of CMAQ funds for transit-oriented, pedestrian-friendly projects that will increase transportation choices, reduce vehicle miles traveled, and improve air quality. State transportation agencies can work collaboratively with state environmental agencies to develop criteria to prioritize CMAQ-funded projects that achieve multiple environmental benefits and improve development projects.

EXAMPLE

California's CMAQ Guidelines

Caltrans, which is the California Department of Transportation, partnered with the California Air Resources Board to develop guidance on how to get the maximum environmental benefit from Congestion Mitigation and Air Quality funds. Together they published a guide and accompanying project database to assist metropolitan planning organizations (MPOs) with project selection.

Caltrans: <http://www.dot.ca.gov/>

5

Adopt a "Complete Streets" policy

ACTION

States should integrate a "complete streets" approach into their transportation planning and funding decisions. These policies require agencies to balance the needs of all users in the planning, design, and construction of all transportation projects. This allows users of all ages and abilities, including pedestrians, bicyclists, motorists, transit riders, older people, children, and those with disabilities, to move safely along and across a network of complete streets. Good multi-modal facilities along major roads can reduce congestion by providing an alternative to short-distance car trips. The improvements in the community and the public safety benefits can be significant. One study showed that the addition of sidewalks, raised medians, and improved intersections reduced pedestrian injury and fatality risk by 28 percent. Other road improvements, like lane narrowing and installation of curb extensions, result in substantial crash reductions.

PROCESS

Complete streets have been a policy goal at the federal level since 2000, and several states, including California and Illinois, have passed laws requiring complete streets planning. A state can implement a complete streets policy administratively by changing rules to require that all new state roads or major rehabilitation projects include pedestrian, bicycle, and transit facilities, and encouraging their inclusion in maintenance and other activities. Guidelines to development of good complete streets policies can be found at www.completestreets.org. In states with strong context-sensitive solutions

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programs, complete streets policies can be incorporated into those programs (see *Policy #3, Adopt a context-sensitive approach for all state transportation projects, in this section*). Department of transportation project managers should be required to justify and document any exceptions to this policy.

Under a robust complete streets policy, most federal transportation funding programs will be used to create complete streets, because projects will consider the needs of all users from inception. Communities seeking funding to retrofit existing “incomplete” streets can fund such projects from Surface Transportation Funds. Smaller, specialized programs can also help. The Safe Routes to School (see *Policy #5, Establish a “Safe Routes to School” program, in the Department of Education section*) program provides funding for pedestrian and bicycle facilities that improve access to schools. In air quality non-attainment areas, infrastructure improvements can be funded under the Congestion Mitigation and Air Quality program (see *Policy #4, Take advantage of flexible federal transportation funding, in this section*). Other federal programs, such as the Transportation Enhancements and the Recreational Trails programs, can also provide critically needed funds. Most importantly, the development of good multi-modal streets can be integrated into core transportation funding in a cost-effective and fiscally sound way.

EXAMPLE

Illinois' Complete Streets Policy

The State of Illinois amended its state highway code in October 2007 to ensure that, “bicycle and pedestrian ways shall be given full consideration in the planning and development of transportation facilities, including the incorporation of such ways into State-funded transportation plans and programs.” The policy was effective immediately for project planning and is required in construction beginning August 2008.

Illinois' Complete Streets Policy SB0314: <http://ilga.gov/legislation/>

Illinois Complete Streets press release: <http://www.completestreets.org/documents/IllinoisCSbillPressRelease10-16-07.doc>

Many more policy examples are available from the National Complete Streets Coalition, which also offers day-long Complete Streets Implementation Assistance workshops for communities ready to write or implement a complete streets policy.

6

Encourage connected street networks

ACTION

The State should encourage localities to develop connected street networks. (The State DOT may also wish to provide funding for creation or extension of local streets that serve the same purpose as expansion of the state system would). Although developers or local governments build most neighborhood streets, they often connect to major streets that are part of the state highway system. Absent a policy directing something else, these development streets usually will be disconnected from each other. Providing multiple routes for regional and neighborhood traffic creates a more flexible system.

PROCESS

A number of actions at the state level can improve the connectivity of street networks. Effective strategies applied by states include technical assistance programs and statewide connectivity standards. For example, minimum connectivity standards can be adopted for any new development connecting to the state highway system. Such performance standards ensure that traffic leaving large residential or commercial subdivisions can travel by multiple routes. This limits bottlenecks at key intersections and reduces the need for traditional high-capacity arterials designed to move traffic at higher speeds. States can also help counties and municipalities redesign the street networks that are not part of the state highway system.

EXAMPLES

New Jersey's Local Technical Assistance Program

The New Jersey Department of Transportation, the Office of Smart Growth, and other state agencies have cooperated to develop the New Jersey Future in Transportation program (NJFIT). One NJFIT initiative is the Local Technical Assistance Program, in which NJFIT agencies work with local governments to redesign their street networks to emphasize connectivity and better land use planning. A notable success story from this program is Flemington, New Jersey, where the state's technical assistance was able to help the township redesign its street network to accommodate growth rather than build a proposed bypass.

New Jersey Department of Transportation: <http://www.nj.gov/transportation>

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Virginia's connected streets

At the request of Governor Tim Kaine, the Virginia General Assembly in 2007 enacted legislation that requires the Commonwealth Transportation Board to develop Secondary Street Acceptance Requirements, promulgated by regulation. These requirements define the conditions and standards that must be met before secondary streets constructed by developers, localities, and entities other than the Virginia Department of Transportation (VDOT) will be accepted into the state secondary system for maintenance by VDOT. A connected street network improves the flow of through-trips on collector and arterial streets, reduces vehicle miles traveled and congestion, reduces emergency response times, promotes alternative transportation options (biking, walking, transit), and improves access to community facilities and shopping areas.

Virginia Department of Transportation: <http://www.virginiadot.org/>

7

Develop an access management program

ACTION

The State should develop an access management policy. The spread of commercial development in shallow strips along state highways is made possible when direct access to the highway is not actively managed. A lack of access planning creates a number of problems. By facilitating strip commercial development in unincorporated areas, a lack of access planning can undermine municipal efforts to revive downtown shopping districts. In town centers or dense urban core areas, excessive driveways can both reduce vehicle capacity and create less pedestrian-friendly sidewalk environments.

Many departments of transportation believe they only have an indirect role in managing access to state highways, and usually deny access permits only based on traffic safety and facility operation standards. However, when a state transportation department grants access to owners of commercial parcels, it creates the perception of vested development rights and increases the pressure on local governments to approve development proposals. Therefore, it is important that programs to manage access to the state highways be cooperatively developed between state transportation departments and local governments.

PROCESS

In order to be successful, state highway access management programs should be:

- developed collaboratively with local planning and public works departments;
- applied consistently and uniformly throughout the state;
- based on a detailed functional classification of roadways reflecting the role of each corridor in the overall network of roads and streets;
- supported by a continuous ongoing training and information program to ensure that local government staff, land owners, and developers understand the program; and
- designed to support implementation of local comprehensive plans, corridor plans, and urban containment policies.

The State's access management policy should include different spacing standards for access to freeways and arterials. On freeways, the critical element of an access management policy is to have large spacing (i.e., more than five miles) between interchanges to encourage clustered development in the corridor. On arterials, the standards for spacing are more complicated. The State may want to limit driveway permits for individual businesses, but encourage multiple access points into residential neighborhoods (see *Action #5, Encourage Connected Street Networks*, in this section).

It is important to note, however, that if access management is overdone, it can have the unintended consequence of causing rather than alleviating congestion by putting too many vehicles through too few access points. In Oregon, Portland Metro has documented that arterial networks should have intersections every 330 to 500 feet to make transportation networks work most efficiently. The point may be to limit the number of driveways, but not necessarily limit the number of intersections.

EXAMPLE

Florida's Access Management Program

Chapter 335 of the 2007 Florida Statutes establishes an access management program, which provides comprehensive statewide standards for driveways that connect to highways. Property owners or developers must apply to the district where their property is located. Districts should consider the logistics and specifics of the pertinent connecting highway (how many accidents have taken place, operational speed and characteristics,

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geographic location, etc.) when making decisions about permit issuances.

Chapter 335 of the Florida Statutes: <http://www.leg.state.fl.us/STATUTES>

Florida's Access Management Program: <http://www.dot.state.fl.us/planning/systems/sm/accman/>

8

Pursue more flexible application of residential street standards

ACTION

Narrow residential streets can help localities calm traffic and make neighborhoods safer places to walk and bicycle. They also are more sustainable than overly wide streets, which increase storm drainage, snow removal and resurfacing costs, and local heat island effects. In many communities, formal or informal residential street standards require streets to be unnecessarily wide, in part out of misperceptions that this will increase safety (the opposite is true), and in part in an attempt to meet requirements of emergency service responders (primarily fire departments). Now, many communities in the United States are partnering with their fire departments to reassess residential street requirements and change their local standards to permit narrower streets in certain situations.

State DOTs can play an important role in helping communities that wish to modify their residential street standards to allow narrow streets. Local residential street standards are often established through state guidance. States can assess their current residential street standards and, if appropriate, allow more flexible application of the standard.

State DOTs generally have a role to play in local street design, although the specific nature of that role varies from state to state. In some states, the DOT has jurisdiction over "local" public streets and thus controls design standards directly. In these states, the DOTs can revise standards for low volume, local streets to guide development of narrower street cross-sections in certain situations. In other states, cities and counties have jurisdiction over their own streets. In such states, a wide variety of standards may be in place, including informal systems based on general interpretations of the AASHTO

Greenbook. In these states, DOTs can provide a valuable service by developing a recommended local street design practice guiding development of more efficient, sustainable local street systems.

PROCESS

States should review the residential street standards in use in their state (whether state or local) to determine if they have become an obstacle to the development of compact, walkable communities. If the standards are outdated, the State should initiate a process to actively engage fire safety, paramedic, traffic safety, and community health professionals to develop modern standards that meet neighborhood design goals while still providing for access by emergency responders. The objective should be to replace inflexible minimum requirements with comprehensive standards that allow for streets that are appropriate to their context, while retaining an appropriate focus on emergency vehicle accessibility, response times, and traffic safety.

EXAMPLE

Oregon's Neighborhood Street Design Guidelines

Oregon conducted a multi-year process that developed a flexible set of standards for neighborhood street design. The initiative, led by the Oregon Department of Transportation and the Department of Land Conservation & Development, produced a consensus set of guidelines entitled Neighborhood Street Design Guidelines: An Oregon Guide for Reducing Street Widths. The process of developing these guidelines included the emergency responder community. The Office of the State Fire Marshal and the Oregon Fire Chiefs Association endorsed the guidelines. The guidance provides design examples, a checklist of key factors for consideration, and suggestions for initiating locally based collaborative efforts to work out place-specific issues.

Oregon's Neighborhood Street Design Guidelines:
<http://www.oregon.gov/LCD/docs/publications/neighstreet.pdf>

9

Reform level-of-service standards

ACTION

Departments of transportation should not automatically impose a high level-of-service standard without first considering the transportation context. For roads of statewide importance, high levels of mobility may need to be maintained and higher level-of-service targets can be warranted. For secondary and tertiary roads, high levels of mobility may not be a priority. For these, maintaining or enhancing the quality of the community should take precedence. There should not be an automatic mandate to address poor level-of-service at all costs every time it arises. Levels-of-service should be one factor, and traffic forecasting one tool, not sole determinants, in project decisions.

Transportation departments generally rank the performance of roads by their level-of-service, but employing this standard can inadvertently discourage or block development in urban core areas, because they typically rank low on standard level-of-service measures. Many jurisdictions, for example, have responded to growing traffic congestion by developing performance standards to ensure that traffic speeds are maintained as areas become more developed. But these standards ignore the role that walking, biking, and transit play in more densely developed areas. Design decisions based on high level-of-service performance measures can end up serving only the motorist at the expense of the very communities that the road is supposed to serve. Decisions made only for the peak hour may tune the roadway to work well for motorists during those hours, but render the road over-designed for the rest of the day and ineffective for all other users. To remedy this, state transportation departments should review how they apply level-of-service standards and, if necessary, work with local governments to revise how the level-of-service is measured.

PROCESS

The process for estimating vehicle level-of-service should be simplified and basic pedestrian, bicycle, and transit measures should be added. While localities generally establish minimum level-of-service standards, state departments of transportation develop the analytical tools and traffic counts used to implement them. States can mitigate the negative impact on level-of-service standards from new infill development by adopting models that also consider the level-of-service for other modes of travel.

One approach some localities are using is to set lower minimum service standards in infill areas designated for growth or eliminate requirements altogether. The downside of this approach is that it fails to reflect the improved access to homes, jobs, and stores that infill can bring to a neighborhood. It also fails to measure the quality of transportation services for other travel modes or create any accountability that could lead to improvement of alternative modes of transportation.

EXAMPLES

Florida's Multi-Modal Quality of Service Standards

The 1999 Florida Growth Management Act allows cities to designate specific multi-modal transportation districts. These districts incorporate different methods of transportation and land use to encourage a reduction of automobile use. Multi-modal quality of service standards measure the quality of facilities for all travel modes, including pedestrian, bicycles, transit, and personal vehicles. Florida's Department of Transportation has also developed a detailed methodology for assessing all transportation modes.

Florida's Multi-Modal Quality of Service Standards: <http://www.dot.state.fl.us/Planning/systems/smllos/pdfs/MMLOS.pdf>

Model Regulations and Plan Amendments for Multimodal Transportation Districts: <http://www.dot.state.fl.us/Planning/systems/smllos/pdfs/MMTDregs.pdf>

Montana Transportation Choices

In 2004, Montana produced a report entitled Montana Transportation Choices that noted that an "overreliance [or] technical misuse or misapplication" of "level of service" standards can have unintended consequences. "The most serious problems with the roadway LOS concept are the fact that it focuses narrowly on increasing the supply of roadway capacity as the primary (or only) objective, and the fact that it disregards a need for modal balance," the report states. Adverse effects include underdevelopment of local and collector roadways, concentration of traffic in a few congested corridors, and unnecessary increases in Vehicle Miles Traveled, the report concludes.

Montana Transportation Choices: http://www.mtsmartgrowth.org/transportation_study/FinalMTTransportChoices.pdf

10

Manage for a reduction in vehicle miles of travel**ACTION**

States should include a reduction in vehicle miles of travel (VMT) among the goals for their DOTs. Over the past fifty years, daily VMT in the United States has increased at about three times the rate of growth in population. Some of this rapid growth in vehicle travel has been the result of increased prosperity and increased mobility, both of which have been positive trends. However, much of the growth in travel actually has little to do with the economics of prosperity, but rather is associated with sprawling suburban and exurban development patterns that have increased the amount of daily household travel without increasing access to jobs, essential services, or other important destinations.

During this time, state DOTs have worked hard to provide the expanded roadway systems needed to service the spread of low-density development. This approach to transportation policy is known as “project and provide.” The transportation agency projects traffic growth and attempts to provide new capacity to serve it. As it turns out, much of this “project and provide” approach to capacity investment has been counterproductive, serving to subsidize and accelerate the sprawl development pattern while failing to reduce congestion or delay – the putative purpose of highway capacity programs in the first place. Now, as energy prices, greenhouse gas emissions, and economic costs of roadway construction have become public policy issues in every state, the inexorable growth in per capita and household VMT no longer seems like a desirable trend.

As a result, states are beginning to evaluate policy frameworks that might begin to slow or even reverse the growth in VMT while still maintaining high levels of transportation system function, access, and connectivity. Interestingly, at the same time this policy approach is attracting attention from transportation professionals, the VMT trend has been attenuating for the first time since World War II. While this is in part related to recent unstable fuel costs, VMT growth rates across the United States had actually begun to drop as early as 2005 in most states before going into the actual decline seen in 2006 and 2007. This offers a unique opportunity to initiate VMT growth policies in conjunction with state transportation programs to address energy, climate change, and economic objectives.

States cannot address the energy and climate change policy environment that they face in the next decade without tackling transportation energy use. While most efforts to curb greenhouse gases focuses on vehicle efficiency and cleaner fuels, even if the most stringent fuel efficiency proposals under consideration are enacted, vehicle emissions still would be 34 percent above 1990 levels in 2030, far from the 60 to 80 percent below 1990 levels by 2050 required for climate protection.

Lowering the number of miles traveled on the state's roads will, in addition to reducing greenhouse gas emission, also save maintenance expenses at a time when most states are facing increasingly tight transportation budgets.

PROCESS

Most states do not have access to accurate VMT data for all travel within their state. All state DOTs are required to participate in an annual data gathering and reporting system with the Federal Highway Administration that includes data on miles of travel by roadway type, vehicle type, and roadway jurisdiction. However, in many states these reporting systems are old and inaccurate, with estimates of travel on local roads and streets especially based on scant data. A first step in addressing VMT growth is for the state DOT to focus on improving the accuracy of its VMT database.

On its surface the idea of limiting VMT growth seems to be contrary to what the public expects from transportation agencies. It sounds like the idea is to limit the public's ability to travel. This actually should not be the objective. Almost any public survey will reveal that people believe they travel more than they want to – they spend too many hours in their cars and fill their gas tanks too frequently. Most of this travel is for a short list of common purposes: access to jobs; connections to schools, churches, friends, and family members; and access to shopping, services, and recreation. A consequence of the sprawling, low-density residential development that has covered vast areas since World War II—and that has been encouraged and subsidized by “project and provide” transportation programs—is that the population is forced to drive long distances for basic household and personal purposes, to the detriment of quality of life and household budgets.

Many states are now beginning to address this self-defeating cycle of “project and provide”/ support sprawl/induce increased travel by recognizing that land

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use and transportation policy cannot be addressed through separate policy “silos.” An integrated approach is required, where transportation investments are planned and prioritized based on a broader set of public objectives, such as economic vitality, energy security, climate change management, and community character. In order to follow a policy path toward managing VMT growth, the State must first make the case to the public as to why decreasing per capita VMT is appropriate and important. The State should describe its VMT growth and the impact of that trend on energy costs, climate change effects, and economic vitality. Working through its legislature the State should:

- develop VMT reduction goals;
- develop tools and best practices to assist regional and local entities in making progress toward the benchmarks;
- identify current strategies to reduce VMT in the state as well as successful strategies in other jurisdictions that may be applicable in the state;
- identify potential new revenue options for local and regional governments to finance VMT reduction efforts; and
- provide for the development of measurement and evaluation tools.

While this process would not necessarily have to be led by the state DOT, it could and perhaps should be. However, others should be involved before the proposal makes it into the legislature. A successful effort will require consultation with and involvement by housing agencies and interests; environmental entities, including open space and public lands managers; the business community; public transit providers; local and regional planners; and developers and builders. In the end, the answer to meeting the travel, access and circulation needs of residents and workers without requiring them to drive long miles in heavy traffic, is to use transportation investments as part of an integrated transportation and land use program that specifically addresses where new housing will be built, how new commercial space can be built in compact, mixed-use settings, and how new schools can be incorporated back into neighborhoods. At the same time, financial policies such as freeway tolls, parking charges, fuel taxes, and pay-as-you-drive insurance programs, can help link the economic structure of local travel closely with a VMT management policy.

EXAMPLES

Washington’s HB 2815, Climate Action & Green Jobs

Signed in 2008, Washington’s Climate Action and Green Jobs bill (HB 2815) requires the department of transportation to adopt broad statewide goals to reduce annual per capita VMT by 2050. The bill requires the department of transportation to develop strategies to decrease the annual per capita VMT by eighteen percent by 2020; thirty percent by 2035; and fifty percent by 2050.

Washington’s HB 2815, Climate Action & Green Jobs: <http://www.ecy.wa.gov/climatechange/GreenEconomy.htm>

California’s SB 375

In September 2008, Governor Arnold Schwarzenegger signed SB 375. The bill mandates that the California Air Resources Board (CARB) must establish regional goals to reduce greenhouse gas emissions across all economic sectors, including land use and transportation. Each of the seventeen metropolitan planning areas in California will have specific emissions reduction targets for 2020 and 2035. The bill requires funding decisions for regional transportation projects to align with the regional planning agencies’ plans to meet the emission goals.

California’s SB 375: <http://www.leginfo.ca.gov/>

11

Encourage transit-oriented development

ACTION

Supporting transit and transit-oriented development yields benefits for the transportation system as a whole, for the environment, and for compact, walkable, mixed-use communities. The state’s department of transportation can give priority for funding to projects in existing nodes, designated growth centers, and transit-oriented development zones. Well-designed transit-oriented development can be a powerful engine for local growth and for maintaining and growing the local tax base.

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<http://www.govinstitute.org/policyguide>

PROCESS

State transportation departments can facilitate partnerships to develop and improve transit-oriented development in specific areas. Partnerships that include local officials, planners, and citizens will be most successful in ensuring that projects incorporate local visions for growth. Departments of transportation should also work with other state departments (e.g., budget, economic development, housing, etc.) to develop a program of direct support and investment in housing and job creation within transit-oriented districts. The support could come in the form of technical assistance or direct financial assistance with the development of street infrastructure in and around transit-oriented developments. Transportation funds can also be used to support housing near transit or employment centers.

Other specific state actions could include:

- Using federal funds to leverage both local and private dollars (e.g., transit station joint development projects);
- Developing a park-and-ride investment strategy where transit intersects state highways;
- Identifying potential station areas and targeting state investment to those areas;
- Investing in local circulators and park-once districts in advance of regional transit; and
- Developing model codes for local governments to facilitate transit-oriented development around station areas, (e.g., form-based codes and transit overlay districts).

EXAMPLES

New Jersey's Transit Village Program

New Jersey created a Transit Village program in which a Department of Transportation and New Jersey Transit partnership offers planning assistance, streamlining, and limited funding for localities that have developed a detailed vision for renewing areas around transit stations into mixed-use, walkable neighborhoods.

New Jersey's Transit Village Program: <http://www.state.nj.us/transportation/community/village>

Oakland, California's Metropolitan Transportation Commission

Transportation for Livable Communities was developed by the Metropolitan Transportation Commission in Oakland, California, some six years ago. The goal was to create vibrant downtown areas, commercial cores, neighborhoods, and transit corridors, to make them

places where people want to live, work and visit. Under the Transportation for Livable Communities program, developers can apply for grants to pay for planning and construction costs. The grants include the Community Design Planning Program, the Capital Program, and the Housing Incentive Program. The Housing Incentive Program rewards local governments for building housing near transit stops. The amount of money rewarded to the local government is determined by the density and the amount of affordable housing units. The Housing Incentive Program does not directly subsidize construction costs, the rewards from the Transportation for Livable Communities program can be used throughout the local government's jurisdiction.

HIP program: http://www.mtc.ca.gov/planning/smart_growth/hip.htm

TLC Handbook: http://www.mtc.ca.gov/library/TLC/TLC-Works_In_Progress.pdf

12

Adopt a broad or regional approach to mitigation planning

ACTION

States should recognize the regional impact of transportation projects and support the use of a regional approach to mitigate the impacts of highway investments. The environmental impacts of transportation projects are typically addressed at a project level. This approach leads to several significant problems. Many environmental impacts are cumulative and large scale. Project level mitigation either fails to identify such impacts or leaves few alternatives for addressing them. Additionally, many mitigation measures, such as preservation of lands that contain critical habitats, stream buffers, and wetlands, are more easily implemented and cost effective at broader regional scales. State departments of transportation can fundamentally shift toward a more comprehensive approach either by ensuring that a broad range of indirect impacts is considered or by conducting an impact analyses at a programmatic level.

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PROCESS

A regional approach to a transportation system, and mitigating transportation impacts, requires investments in research, planning capacity, and implementation mechanisms. For example, making natural resource inventories available speeds evaluation of mitigation opportunities. Regional scale mitigation also requires working with a larger set of local stakeholders. In addition, the cost-effectiveness benefits of regional mitigation are easier to achieve when entities such as land trusts or mechanisms such as transfer or purchase of development rights programs, state land conservation initiatives, and so forth are already in place.

States should create a system for coordinating the assessment of natural habitats with respect to transportation projects. Once a State – through an Environmental Impact Statement or Environmental Assessment -- recognizes and articulates the goals of the transportation project, all appropriate state agencies (transportation, planning, natural resources, health, etc.) that can help with an assessment of the project should be convened for a series of discussions concerning potential environmental impacts.

One approach is to bring appropriate federal, state, and local agencies together as signatories to a “streamlining agreement” that can support joint policy making, habitat preservation, and the use of techniques such as Context Sensitive Design (see Action #3, *Adopt a context-sensitive approach for all state transportation projects, in this section*).

EXAMPLES

Washington's Watershed Program

The State of Washington has implemented a comprehensive approach to highway project mitigation. The Washington Department of Transportation's Watershed Program evaluates alternatives across a broader geographic scale to identify alternatives to traditional mitigation projects. For major projects, watershed characterization studies are conducted with the goal of answering a fundamental question: “Where should we target natural resource improvements to mitigate impacts of a transportation project while achieving the greatest environmental benefit?”

Washington's Watershed Program:
<http://www.wsdot.wa.gov/Environment/Watershed/characterization.htm>

North Carolina's Ecosystem Enhancement Program

The North Carolina Department of Environment and Natural Resources, the U.S. Army Corps of Engineers, and the North Carolina Department of Transportation signed a Memorandum of Agreement that established the Ecosystem Enhancement Program, which aims to restore, maintain, and protect water habitat areas throughout the state. One provision of this program provides watershed-based mitigation (compensation) if transportation and infrastructure development have unavoidable environmental consequences.

North Carolina's Ecosystem Enhancement Act:
<http://www.nceep.net/>

Oregon's Collaborative Environmental and Transportation Agreement for Streamlining

Oregon's Collaborative Environmental and Transportation Agreement for Streamlining promotes environmental stewardship and agency collaboration. The agreement requires all Oregon transportation jurisdictions to develop land use and transportation plans that reflect state goals. The program was approved in April 2001 by 10 state and federal agencies, including the Oregon Department of Transportation, the Federal Highway Administration, the U.S. Army Corps of Engineers, the U.S. Environmental Protection Agency, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service.

Oregon's Collaborative Environmental and Transportation Agreement: <http://www.environment.fhwa.dot.gov/streamling/newsletters/oct01nl.asp>

13

Support transportation demand management

ACTION

While most transportation departments have traditionally focused on providing transportation supply, in recent years departments that are increasingly overburdened physically and financially have turned to “demand management” as a means of controlling cost and meeting needs. “Demand management” generally refers to strategies or techniques that reduce the number of vehicles that use highways by providing travelers with other mobility options. Examples of these strategies include carpooling or vanpooling, transit, telecommuting

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and flexible work schedules, park-and-ride, and integrated land use and transportation project design that allows more pedestrian or bicycle travel.

As transportation budgets tighten, the pressure to reform transportation operations often creates an opportunity to consider market-based policies that can help manage transportation demand. For example, pricing parking to better reflect its opportunity cost can quickly and cheaply reduce congestion and improve air quality.

PROCESS

Several state departments of transportation directly support Transportation Demand Management. It is probably faster and easier for a state DOT to start supporting Commute TDM than just about anything else in this chapter. Most regional TDM organizations need financial and strategic support in the current economic environment, and TDM is almost certainly the single most cost-effective action a DOT can take to reduce VMT.

EXAMPLE

Commuter Connections, Washington, D.C. metropolitan area

Commuter Connections, in the greater Washington, D.C. area, is a regional network of transportation organizations that provides the public with information on commuting options and helps employers establish commuting benefits and assistance programs for their employees. The program also provides carpool/vanpool matching, transit route and schedule information, a regional Guaranteed Ride Home program, bicycle to work information, park-and-ride lot and HOV lane information, telecommute/telework program assistance, InfoExpress commuter information kiosks, Internet-based commuter information services, and employer services. All services are provided free to the public and employers.

Commuter Connections is a program of the National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments and is funded by the District, Maryland, and Virginia Departments of Transportation as well as the U.S. Department of Transportation. Many of the local Commuter Connections members receive grant funding directly from their respective state government.

Commuter Connections: <http://www.mwco.org/commuter2/>

14

Revise transportation modeling methods

ACTION

Some states and most regional metropolitan planning organizations (MPOs) create and use sophisticated transportation models to estimate the effects of proposed future transportation projects. These models are often critically important to the development of regional long-range transportation plans that must be satisfactorily completed before state projects may receive federal transportation funding.

Increasingly, these models are being used to forecast the impacts of transportation projects on related issues, such as the release of greenhouse gases that contribute to climate change. To enhance the link between transportation and land use planning, it is important to remove barriers to building well-designed, mixed-use projects in accessible places. Therefore, states that do their own modeling, or that work with MPOs on modeling, should encourage the use of transportation modeling software that can help localities capture the traffic impact of development, including the impact of "smart growth" development. For example, methods for calculating the number of additional vehicle trips generated by new development often significantly overestimate the traffic impact of many infill projects, because the standard formulas are based on studies of existing sites in auto-dependent suburban locations. Applying these suburban standards to urban projects such as transit-oriented development projects can overestimate the number of vehicle trips generated by mixed-use, infill projects by 30 to 50 percent. VMT for more typical mixed-use infill projects can be overestimated by 10 to 20 percent.

The types of traffic models, assumptions, and internal structures, such as size of Transportation Analysis Zones (TAZs), have increasingly become a subject of debate. Robust growth assumptions, large TAZs, trend growth scenarios, and low fuel prices all served us well in the era when the Interstate Highway System was being constructed. Continuing to use these practices or parameters in the current era will return poor answers. Departments of transportation should ask:

- 1 What are the growth assumptions for the model and how were they developed?
- 2 Are these assumptions still valid in alternative scenarios that are of interest?

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- 3 How many TAZs were used in the modeling, and are they small enough to capture walking and internal trips?
- 4 Did the model account for the fact that the additional transportation capacity that may be needed to keep up with anticipated growth may not actually be built? If that is the case, does the absence of that infrastructure restrain other growth assumptions? In other words, is the relationship between actual land use and transportation adequately represented in the modeling framework?
- 5 Most of the MPO models do not account for the movement of freight and their impacts on infrastructure and congestion. If they are not explicitly accounted for, are the model outputs presented with sufficient qualifications?

The most important thing that a state department of transportation can do is reevaluate whether traffic modeling is needed in the first place. Too often, as a first step in the planning process, departments of transportation and communities run a traffic model that is designed for suburban development, and subsequently overestimate growth and necessary road size with no attention to the context and community that the transportation investment is seeking to support.

PROCESS

To better understand the relationship between more compact development and traffic, states can use Smart Trip Generation Formulas to model traffic impacts. In urban areas, trip generation rates should be adjusted to account for transit availability, the amount of nearby activities that can be reached on foot, and the quality of the pedestrian environment. Departments of transportation should ensure that any future modeling can handle all multimodal trips, including pedestrian. This might require adding complexity to the model, reducing the size of the TAZs, or adding more pedestrian and transit links, which could add some costs to the modeling. However, this step will be necessary to avoid overestimation of projections, over-design of projects, and unnecessary damage to communities. States should use any model results with caution, by understanding the assumptions and inputs that underlie them. Pedestrian Environment Factors, which relate trip generation to characteristics of the built environment, can be used to adjust mode choice at a zonal level. Furthermore, departments of transportation should investigate the impact of freight on various transportation links and

develop policies (along with the private sector, such as railroads and trucking companies) to enhance the results of MPO modeling efforts.

EXAMPLES

Oregon's Modeling Improvement Program

The state of Oregon has a well-integrated transportation, land use and economic model.

Oregon's Modeling Improvement Program: http://tmip.fhwa.dot.gov/clearinghouse/docs/case_studies/omip/

Help Desk

The following resources are available on our Web site at <http://www.govinstitute.org/policyguide/Transportation/helpdesk.html>

Reports

The Role of State DOTs in Support of Transit-Oriented Development (TOD), Cambridge Systemics, Inc; *Transportation Research Board: Multimodal Level of Service Analysis for Urban Streets*; *Smart Transportation Guide: Planning and Designing Highways and Streets that Support Sustainable and Livable Communities*, Pennsylvania and New Jersey DOTs; Trust for Public Land, *Taking the High Road*; *Caltrans Regional Planning Handbook*; *Methods to Find the Cost-Effectiveness of Funding Air Quality Projects*; *The National Governors' Association's Center for Best Practices – Fix It First Policy Brief*

Organizations

Rural Transportation.org; The Surface Transportation Policy Partnership

Websites

Federal Highway Administration Analysis of State Long-Range Transportation Plans; Value Pricing Pilot Program; Pedestrian and Bicycle Information Center; Federal Highway Administration Bicycle and Pedestrian Program; The Surface Transportation Policy Project – road condition decoder; Project for Public Spaces' Context Sensitive Solutions; U.S. Federal Highway Administration, Context Sensitive Design/Thinking Beyond the Pavement; ITE Context Sensitive Solutions Website; Reconnecting America/Center for Transit-Oriented Development; Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users legislation (SAFETEA-LU); Congestion Mitigation and Air Quality (CMAQ)