

GAO

Report to the Chairman, Committee on  
Transportation and Infrastructure,  
House of Representatives

December 2010

# STATEWIDE TRANSPORTATION PLANNING

## Opportunities Exist to Transition to Performance-Based Planning and Federal Oversight



G A O

Accountability \* Integrity \* Reliability

Highlights of [GAO-11-77](#), a report to the Chairman, Committee on Transportation and Infrastructure, House of Representatives

## Why GAO Did This Study

Through the statewide transportation planning process, states decide how to spend federal transportation funds—almost \$46 billion in fiscal year 2009. Draft legislation to reauthorize federal surface transportation legislation would, among other things, revise planning requirements to recognize states' use of rural planning organizations (RPO) and require performance measurement. As requested, GAO examined (1) states' planning activities and RPOs' satisfaction that rural needs are considered, (2) states' planning challenges, (3) the U.S. Department of Transportation's (USDOT) approach to overseeing statewide planning, and (4) states' use of performance measurement and opportunities to make statewide planning more performance based. GAO analyzed planning documents; surveyed departments of transportation in 50 states, Puerto Rico, and Washington, D.C., and 569 RPOs; interviewed officials in 6 states; and held an expert panel on performance-based planning.

## What GAO Recommends

To make statewide planning more performance based, Congress should consider requiring states to update their long-range plans on a prescribed schedule, identifying outcomes for statewide planning and directing USDOT to assess states' progress in achieving them, and requiring USDOT and states to collaboratively develop performance measures. USDOT provided technical comments which we incorporated into the report as appropriate.

View [GAO-11-77](#) or key components. To view the e-supplement online, click [GAO-11-78SP](#). For more information, contact Phillip R. Herr at (202) 512-2834 or [herrp@gao.gov](mailto:herrp@gao.gov).

December 2010

# STATEWIDE TRANSPORTATION PLANNING

## Opportunities Exist to Transition to Performance-Based Planning and Federal Oversight

### What GAO Found

States conduct a variety of long- and short-range planning activities, and the majority of RPOs surveyed reported being generally satisfied that rural needs are considered. To develop required long-range statewide transportation plans (long-range plans), states conduct research activities, such as inventorying assets and modeling traffic. While the resulting plans generally include some performance elements, such as goals, many plans do not include performance targets. Such targets are not required, but prior GAO work shows that targets are useful tools to indicate progress toward achieving goals. To develop required short-range plans—state transportation improvement programs (STIP)—states assess needs and determine funding allocations. However, in selecting projects, states assigned greater importance to factors such as political and public support than to economic analysis of project benefits and costs. While the majority of surveyed RPOs reported being satisfied that their rural needs were considered, some RPOs reported less satisfaction with their role in allocating funds for rural areas.

States commonly cited insufficient or uncertain funding to implement transportation projects among the primary challenges to long- and short-range planning. States also reported that involving the public and addressing transportation data limitations were significant long-range planning challenges. Short-range planning challenges included meeting federal requirements to demonstrate the availability of sufficient project funding and to update the STIP to reflect changes.

USDOT has a limited role in the oversight of long-range plans, and pursuant to federal law, its STIP oversight focuses on states' compliance with procedures. Furthermore, USDOT is not required to review long-range plans, states are not required to update them on a schedule, and some states reported infrequent updates. For example, 10 states reported not updating plans since the most recent surface transportation authorization in 2005. Limited USDOT oversight and infrequent updates present risks, including the ineffective use of federal planning funds. For the STIP, USDOT's oversight focuses, as required, on states' compliance with federal planning procedures. Information on whether states achieve outcomes such as reducing congestion is limited.

While states are not required to set performance outcomes in planning, most states reported using performance measurement in the areas of safety and asset condition. Several challenges limit broader use of performance measures, including identifying indicators for qualitative measures such as livability and collecting data across transportation modes. Through our expert panel and interviews, we identified several elements that could improve states' use of performance measures, including national goals, federal and state collaboration on developing performance measures, appropriate targets, and revised federal oversight focusing on monitoring states' progress in meeting outcomes.

---

# Contents

---

<b>Letter</b>		1
	Background	4
	State DOTs Conduct a Variety of Long- and Short-Range Planning Activities, and Surveyed RPOs Are Generally Satisfied Their Needs Are Considered	11
	Funding, Public Involvement, and Administrative Requirements Are the Primary Challenges in Statewide Planning	26
	USDOT Has Limited Oversight Authority of Long-Range Statewide Transportation Plans, and STIP Oversight Focuses on Process	34
	Most States Reported Making Some Use of Performance Measurement for Planning, but a Performance-Based Framework Offers Opportunities to Improve Statewide Planning	40
	Conclusions	50
	Matters for Congressional Consideration	50
	Agency Comments	51
<b>Appendix I</b>	<b>Scope and Methodology</b>	52
<b>Appendix II</b>	<b>Information on the Participation of Rural Planning Organizations in Statewide Transportation Planning</b>	58
<b>Appendix III</b>	<b>GAO Contact and Staff Acknowledgments</b>	66
<b>Tables</b>		
	Table 1: Number of State DOTs Reporting Using Performance Measurement to Inform Decisions in the Statewide Planning Process in the Last 12 Months	41
	Table 2: Panelists on the GAO and National Academy Expert Panel	56
	Table 3: Transportation Planning Funds Received by RPOs by Source and Amount	59

---

---

## Figures

Figure 1: Statewide Transportation Planning Roles and Responsibilities	6
Figure 2: Total State Apportionments of FHWA and FTA Statewide Transportation Planning Funds, Fiscal Years 2000 through 2009	10
Figure 3: Selected Elements State DOTs Reported Including in Their Long-Range Statewide Transportation Plans	14
Figure 4: Selected Factors State DOTs Reported Were of Great or Very Great Importance in Decisions to Include Projects in the STIP	18
Figure 5: State DOTs That Reported Having Written Contractual Agreements with RPOs	23
Figure 6: Percentages of RPOs That Reported Satisfaction and Dissatisfaction with Their Ability to Participate in Selected Statewide Planning Activities	25
Figure 7: Number of State DOTs That Identified the Following among Their Most Significant Challenges Encountered in Developing the Long-Range Statewide Transportation Plan	29
Figure 8: Number of State DOTs That Identified the Following among Their Most Significant Challenges Encountered in Developing the STIP	32
Figure 9: Number of Years between Updates of the Long-Range Statewide Transportation Plan as Reported by State DOTs	35
Figure 10: Great or Very Great Challenges to Using Performance Measures for Transportation Planning Reported by State DOTs	44
Figure 11: Survey Responses for Transportation Planning Activities Conducted by RPOs	60
Figure 12: Survey Responses for RPOs' Opinion of the Higher-Priority Needs for the Nonmetropolitan Areas of Their Region	61
Figure 13: Survey Responses for State DOT Activities Performed to Consult with RPOs in the Statewide Planning Process	63
Figure 14: Surveyed RPOs' Satisfaction with Their Ability to Participate in State DOT Activities	65

---

---

## Abbreviations

AASHTO	American Association of State Highway Transportation Officials
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GHSA	Governors Highway Safety Association
GPRA	Government Performance and Results Act of 1993
HPMS	Highway Performance Monitoring System
MDOT	Montana Department of Transportation
MPO	metropolitan planning organization
NHTSA	National Highway Traffic Safety Administration
PennDOT	Pennsylvania Department of Transportation
RPO	rural planning organization
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users
state DOT	state departments of transportation
STIP	state transportation improvement program
SPR	FHWA's State Planning and Research Program
SPRP	FTA's State Planning and Research Program
TIP	transportation improvement program
TIGER	Transportation Investment Generating Economic Recovery
USDOT	U.S. Department of Transportation

---

### View **GAO-11-77** key component

*Statewide Transportation Planning: Surveys of State Departments of Transportation and Regional Planning and Development Organizations (GAO-11-78SP)*, an e-supplement to GAO-11-77

This is a work of the U.S. government and is not subject to copyright protection in the United States. The published product may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.



G A O

Accountability \* Integrity \* Reliability

United States Government Accountability Office  
Washington, DC 20548

---

December 15, 2010

The Honorable James L. Oberstar  
Chairman  
Committee on Transportation and Infrastructure  
House of Representatives

Dear Mr. Chairman:

The statewide transportation planning process, administered through each state's department of transportation (state DOT), is the forum through which states decide how to spend significant amounts of federal surface transportation funds. In fiscal year 2009, the U.S. Department of Transportation (USDOT) apportioned almost \$46 billion to states and urbanized areas for highway and transit projects to be developed through the statewide transportation planning process. This amount included almost \$36 billion for highway infrastructure projects through the Federal Highway Administration (FHWA) and approximately \$10 billion in transit grants to urbanized areas and states through the Federal Transit Administration (FTA). The statewide transportation planning process is informed by transportation planning performed by metropolitan planning organizations (MPO) that lead transportation planning in urbanized areas—geographic areas with a population of 50,000 or more. Although states must comply with federal planning requirements administered jointly by FHWA and FTA, states have considerable discretion to allocate federal funds and select projects. We recently reported that in fiscal years 2007 and 2008, all states received more federal funding for highway programs than users contributed to the Highway Account of the Highway Trust Fund, the primary source of federal highway and transit funds.<sup>1</sup> At the same time, estimates of the costs to repair or upgrade aging transportation infrastructure—as well as expand capacity to meet increased demand—top hundreds of billions of dollars. Hence, decisions made in the statewide transportation planning process are critical to

---

<sup>1</sup>Funds deposited into the Highway Account of the Highway Trust Fund are primarily collected from taxes on motor fuels and truck-related items and distributed to the states using a series of formulas. States generally received more funding for highway programs than they contributed to the highway account of the trust fund in recent years because more funding was authorized and apportioned to states than was collected from the states and the account was supplemented by general funds from the U.S. Treasury. See GAO, *Highway Trust Fund: Nearly All States Received More Funding Than They Contributed in Highway Taxes Since 2005*, GAO-10-780 (Washington, D.C.: June 30, 2010).

---

ensuring that limited federal transportation funds are spent wisely and deliver intended results.

Funding for federal surface transportation programs, including statewide transportation planning, is authorized under the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), which expired in September 2009. The Surface Transportation Extension Act of 2010 extended the funding authorization for SAFETEA-LU programs through December 31, 2010.<sup>2</sup> Congress is currently developing legislation for a new surface transportation authorization. In recent years, we have asked Congress to consider refocusing surface transportation programs to make them more performance based.<sup>3</sup> In 2009, the House Committee on Transportation and Infrastructure issued draft legislation to reauthorize surface transportation programs that proposes moving statewide transportation planning toward a more performance-based framework.<sup>4</sup> The draft legislation would also recognize state-designated rural planning organizations (RPO)—planning bodies representing areas with a population of less than 50,000 people—and direct states to coordinate with such organizations in the statewide transportation planning process. To help inform congressional efforts, you asked us to provide information on current statewide transportation planning activities, challenges, and oversight. Accordingly, we examined

- planning activities conducted by state DOTs and the extent to which RPOs are satisfied that rural needs are considered in statewide planning,
- challenges encountered by state DOTs in carrying out planning responsibilities,
- FHWA’s and FTA’s approach to overseeing statewide transportation planning, and

---

<sup>2</sup>Pub. L. No. 111-147, Title IV, 124 Stat. 71, 78 (Mar. 18, 2010).

<sup>3</sup>GAO, *Surface Transportation: Restructured Federal Approach Needed for More Focused, Performance-Based, and Sustainable Programs*, [GAO-08-400](#) (Washington, D.C.: Mar. 6, 2008).

<sup>4</sup>U.S. House of Representatives, Committee on Transportation and Infrastructure, *The Surface Transportation Authorization Act of 2009: A Blueprint for Investment and Reform* (Washington, D.C., June 18, 2009).

- 
- the extent to which state DOTs are using performance measurement for planning and opportunities to make statewide planning more performance based.

To gather information for addressing all these issues, we reviewed and analyzed federal and state planning documents and applicable laws and regulations, and surveyed state DOTs in all 50 states, the District of Columbia, and Puerto Rico, receiving responses from 100 percent of those surveyed.<sup>5</sup> We also interviewed federal, state, and local planning officials in Louisiana, Montana, Pennsylvania, Texas, Washington state, and West Virginia. These states were selected to obtain a diverse mix of planning contexts based on geography, percentage of the population covered by MPOs, and stakeholder recommendations, among other factors. To determine the extent to which RPOs are satisfied that rural needs are considered in statewide planning, we surveyed 569 regional planning and development organizations in the 50 states to identify those organizations that coordinate or conduct surface transportation planning in nonmetropolitan areas, referred to as RPOs in this report.<sup>6</sup> We received responses from 409 organizations, or 72 percent of those surveyed. To describe FHWA's and FTA's approach to overseeing statewide transportation planning, we reviewed FHWA and FTA documents and interviewed officials at USDOT headquarters, six FHWA division offices, and four FTA regional offices. To identify opportunities to make statewide planning more performance based, we convened a panel of transportation planning experts through the National Academy of Sciences, and we interviewed transportation planning stakeholders.

We conducted this performance audit from October 2009 through December 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives. See appendix I for more detailed information on our scope and methodology and appendix II for additional information on the results of our RPO survey. In addition,

---

<sup>5</sup>Our discussion of state DOTs in this report includes the state DOTs in the 50 states as well as in the District of Columbia and Puerto Rico.

<sup>6</sup>States that employ such organizations refer to them by different names, including rural planning organizations, regional transportation planning organizations, and others. In this report, we use the general term RPO to refer to all such organizations.

---

see the electronic supplement to this report—[GAO-11-78SP](#)—for a complete list of frequencies for questions from both surveys.

We provided a copy of this report to USDOT for review and comment. USDOT officials provided technical comments which we incorporated into the report, as appropriate.

---

## Background

Each state, as well as the District of Columbia and Puerto Rico, is required to carry out a continuing, cooperative, and comprehensive statewide transportation planning process. The statewide transportation planning process addresses both urbanized and nonmetropolitan areas of the state and includes both highway and transit needs. For urbanized areas with a population of 50,000 or more, state DOTs must coordinate planning activities with MPOs—federally recognized and funded organizations representing local governments that lead transportation planning activities in metropolitan areas. To receive federal transportation funding, any project in an urbanized area must emerge from the relevant MPO and state DOT planning process. For nonmetropolitan areas not covered by an MPO, states must consult with and provide opportunities for local officials to participate in statewide planning. Some states choose to fulfill this requirement by consulting with RPOs, which are typically voluntary planning organizations that serve as a forum for local officials to develop consensus on regional transportation priorities. In some cases, RPOs may serve a wide geographic area comprising multiple rural counties whose combined population may greatly exceed 50,000. States without RPOs may consult directly with nonmetropolitan local officials with responsibility for transportation planning to fulfill their consultation requirements.

To meet federal planning requirements, states must develop a long-range statewide transportation plan<sup>7</sup> and a state transportation improvement program (STIP) (see fig. 1). The long-range statewide transportation plan establishes a state's strategic vision and direction for its transportation investments for at least a 20-year period. This plan may vary in content from state to state, from a broad, policy-oriented document to a document containing specific project information. However, the plan must provide for the development and implementation of a multimodal transportation system for all areas of the state, and for public comment before it is

---

<sup>7</sup>In some cases in this report we refer to the long-range statewide transportation plan as the long-range plan.

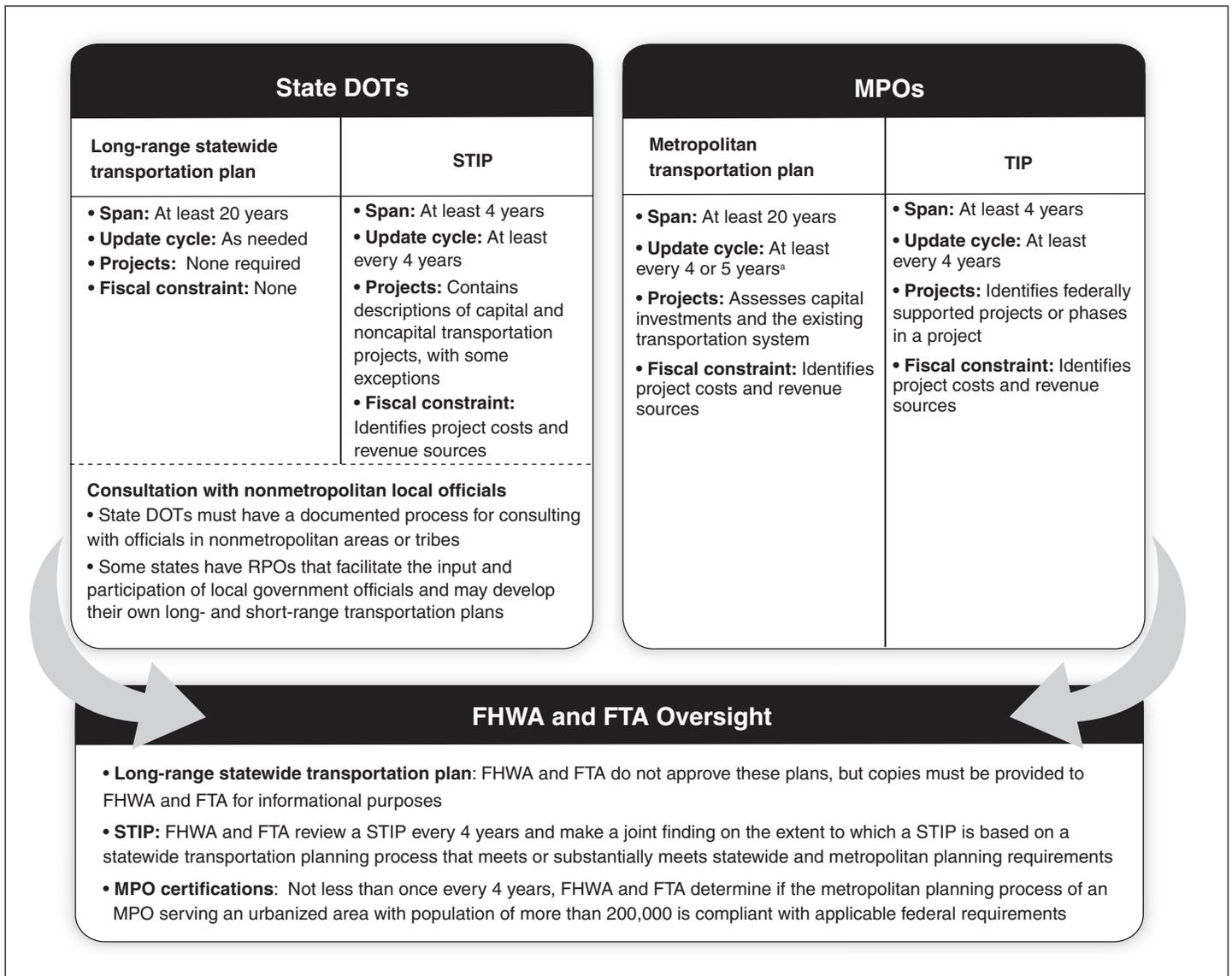
---

published. Currently, there are no requirements for the long-range statewide transportation plan to include specific project information, a financial plan demonstrating how the plan is to be funded and implemented, performance measures for achieving goals, or a regularly updated schedule, and the state is not required to obtain federal approval for the plan. The STIP is the state program of transportation projects covering at least a 4-year period that are to be supported with federal surface transportation funds, as well as regionally significant projects requiring an action by FHWA or FTA, whether or not federally funded. Each project must be consistent with the long-range statewide transportation plan and approved long-range metropolitan transportation plans. The STIP must be fiscally constrained, meaning it shall include a project, or an identified phase of a project, only if full funding can reasonably be anticipated within the time period contemplated for completion of the project. Although federal planning statutes and regulations do not define specific national goals or outcomes that states should address in their planning documents, the statewide planning process must provide for the consideration and implementation of specific statutorily defined planning factors in developing both the long-range statewide transportation plan and the STIP, which include economic vitality, safety and security, accessibility and mobility, protecting and enhancing the environment, and promoting energy conservation, among others.<sup>8</sup>

---

<sup>8</sup>23 U.S.C. § 135(d) and 49 U.S.C. § 5304 (d).

**Figure 1: Statewide Transportation Planning Roles and Responsibilities**



Sources: GAO analysis of federal planning requirements and FHWA and FTA documents.

<sup>a</sup>MPOs are required to review and update the transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas.

MPOs are also required to produce a long-range transportation plan, referred to as a metropolitan transportation plan, and a transportation improvement program (TIP). The metropolitan transportation plan spans

---

at least 20 years and includes long- and short-range strategies and actions to ensure an effective, integrated multimodal transportation system. The TIP spans at least 4 years and includes all projects in the MPO's jurisdiction that are to receive federal surface transportation funding or that are of regional significance. The TIP must, at a minimum, be updated every 4 years, and the metropolitan transportation plan must be updated every 4 or 5 years.<sup>9</sup> Both the TIP and the metropolitan transportation plan must be fiscally constrained. In addition, MPOs serving urbanized areas with a population of more than 200,000 are required to develop a congestion management process that identifies actions and strategies to reduce congestion. States participate in the metropolitan planning process by, for example, reviewing and approving the MPO's TIP. If the state approves the TIP, the state must incorporate it, without change, into the STIP.

At least every 4 years, state DOTs are required to submit an updated STIP to FHWA and FTA for review and approval, in which the state certifies that the transportation planning process has been carried out in accordance with federal planning requirements. FHWA and FTA must review each state DOT's STIP and make a joint finding on the extent to which the STIP is based on a planning process that meets or substantially meets the federal planning requirements, including but not limited to whether the state has demonstrated fiscal constraint in the STIP, used a documented process for involving the public and consulting with nonmetropolitan local officials, and included MPO TIP projects in the STIP. USDOT is not required to review or approve long-range statewide transportation plans, but states must provide copies of any new or amended plans to USDOT for informational purposes.<sup>10</sup>

The Federal-Aid Highway Program is administered through a federal-state partnership. State and local governments execute the programs by matching and distributing federal funds; planning, selecting, and supervising projects; and complying with federal requirements. FHWA, through its division office in each state, delivers technical expertise and fulfills oversight functions. Federal transit programs are generally

---

<sup>9</sup>MPOs are required to review and update the metropolitan transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas. An air quality nonattainment area is a region that the Environmental Protection Agency has designated as not meeting federal air quality standards. An air quality maintenance area is a region previously designated as a nonattainment area.

<sup>10</sup>23 C.F.R. § 450.214(p).

---

administered through a federal-local partnership, although rural programs are administered at the state level. FTA, through its headquarters and 10 regional offices, provides financial assistance, establishes requirements, performs oversight, and conducts research. Grant recipients such as local transit agencies are responsible for matching federal funds and for planning, selecting, and executing projects while complying with federal requirements.

In supporting the statewide transportation planning process, FHWA provides states with the bulk of the federal funding for planning and research (see fig. 2). Through its State Planning and Research (SPR) program, FHWA provides sums equal to 2 percent of each state's formula apportionment for several Federal-Aid Highway programs.<sup>11</sup> In fiscal year 2009, FHWA provided states with a total of more than \$680 million in SPR funds. FHWA regulations give states significant flexibility in applying SPR funds for planning—as long as FHWA has determined that the state has collected data that FHWA requires on the performance, condition, and use of the nation's transportation systems, including the condition of road and pavement surfaces. These data are collected through FHWA's Highway Performance Monitoring System (HPMS) and they constitute some of the performance data that states collect on the condition of their public roads.<sup>12</sup> A state may apply up to 75 percent of its annual SPR allocation to activities of its choosing to support long- and short-range planning requirements, but generally must expend no less than 25 percent of its annual SPR funds on research, development, and technology transfer activities. State DOTs may apply their SPR funds to in-house planning activities or allocate amounts to support the planning activities of MPOs,

---

<sup>11</sup>FHWA SPR funds are equal to 2 percent of each state's formula apportionment of funds for several programs, including the Congestion Mitigation and Air Quality Improvement, Equity Bonus, Highway Bridge, Highway Safety Improvement, National Highway System, Interstate Maintenance, and Surface Transportation programs. 23 U.S.C. § 505.

<sup>12</sup>FHWA is required to collect certain data to meet its responsibilities to Congress and the public, and it relies on states to collect some of these data through its HPMS. See 23 C.F.R. § 420.105(b). According to FHWA, HPMS data are also used for assessing highway system performance under FHWA's strategic planning process, including progress made toward meeting the objectives in FHWA's annual performance plan.

---

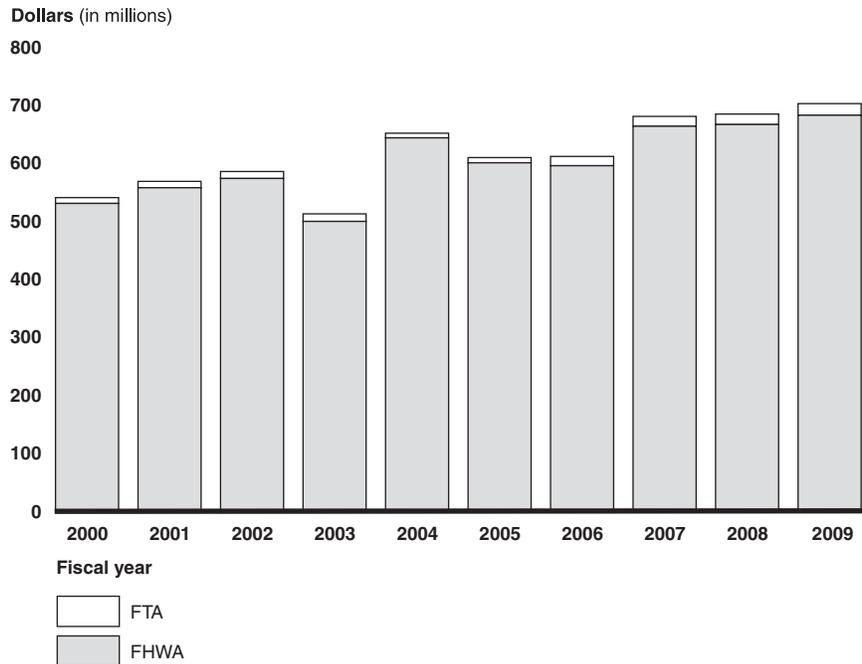
RPOs, or other planning partners.<sup>13</sup> States must document activities proposed to be accomplished with SPR funds, and FHWA must approve these activities. FTA apportions planning funds to states through its State Planning and Research Program (SPRP).<sup>14</sup> As with their SPR funds, states may authorize some of their SPRP assistance to support the planning activities of MPOs, local governments, or other planning organizations. State DOTs are encouraged to provide FTA with an SPRP work program in their SPRP grant applications.

---

<sup>13</sup>In addition to statewide transportation planning funds, 1.25 percent of federal-aid highway funding from the Interstate Maintenance, National Highway System, Surface Transportation, Congestion Mitigation and Air Quality Improvement, and Highway Bridge programs is apportioned, based on population, to the states as metropolitan planning funds. Generally states then provide each of their MPOs with baseline funding and distribute any remaining balance according to a formula. See GAO, *Metropolitan Planning Organizations: Options Exist to Enhance Transportation Planning Capacity and Federal Oversight*, [GAO-09-868](#) (Washington, D.C.: Sept. 9, 2009).

<sup>14</sup>According to federal statute, 17.28 percent of the amounts authorized for capital investment grants are allocated to FTA's SPRP for apportionment to each state according to a statutory formula. 49 U.S.C. § 5305 (g)(2).

**Figure 2: Total State Apportionments of FHWA and FTA Statewide Transportation Planning Funds, Fiscal Years 2000 through 2009**



Source: FHWA and FTA notices.

Note: The FHWA planning funds depicted here are SPR program funds authorized under 23 U.S.C. § 505, and the FTA planning funds are SPRP funds authorized under 49 U.S.C. § 5305.

In recent years, we have recommended that federal transportation programs be based on well-defined goals and that planning be more performance based and better linked to outcomes. We have previously reported that, for many surface transportation programs, goals are numerous and conflicting and federal oversight of these programs has no relationship to the performance of either the transportation system or of the grantees receiving federal funds.<sup>15</sup> Performance measurement, a central component of performance-based planning, is the ongoing monitoring and reporting of program accomplishments. As our prior work has shown, measuring performance allows organizations to track the progress they are making toward their goals and gives managers crucial information on which to base their organizational and management decisions. Recently, we asked Congress to consider making federal and

<sup>15</sup>GAO-08-400.

---

metropolitan transportation programs more performance based by requiring MPOs to identify specific transportation planning outcomes and requiring DOT to assess MPOs' progress in achieving these outcomes through a certification review process.<sup>16</sup> Draft legislation authorizing surface transportation programs would require USDOT to set transportation planning performance measures for MPOs and require MPOs to develop performance targets to meet those measures.<sup>17</sup> In addition, we have recommended that FHWA link its activities and staff expectations to its oversight goals and measures and to develop an overall plan for its oversight activities tied to goals and measures.<sup>18</sup>

---

## State DOTs Conduct a Variety of Long- and Short-Range Planning Activities, and Surveyed RPOs Are Generally Satisfied Their Needs Are Considered

---

### State DOTs Conduct Several Research Activities to Develop Long-Range Plans, but Many Plans Do Not Include Performance Elements and Project-Specific Information

Through our survey and interviews, we found that state DOTs commonly conduct several research activities in developing their long-range statewide transportation plans, including developing inventories and reviewing existing transportation assets, conducting corridor studies, and using transportation demand models. In addition, most state DOTs reported that their long-range statewide transportation plans include some performance-based planning elements, such as broad goals and objectives for the state's transportation system, but most state DOTs reported that

---

<sup>16</sup>[GAO-09-868](#).

<sup>17</sup>The measures proposed would address the degree to which the long-range metropolitan transportation plan reduces congestion, improves mobility and safety, and increases the state of good repair of surface transportation assets, among others. See Committee on Transportation and Infrastructure, *The Surface Transportation Authorization Act of 2009: A Blueprint for Investment and Reform*.

<sup>18</sup>GAO, *Federal-Aid Highways: FHWA Needs a Comprehensive Approach to Improving Project Oversight*, [GAO-05-173](#) (Washington, D.C.: Jan. 31, 2005).

---

Long-Range Planning Research  
Activities

their plans do not include other key elements, such as quantitative performance targets and project and cost information.

**Developing inventories and reviewing existing transportation assets.** Forty-six state DOTs reported that they inventoried major elements of their existing transportation system, such as interstate highways and bridges, and 34 state DOTs reported that they reviewed the condition of existing assets to determine those with the greatest need. USDOT officials and transportation stakeholders told us that many state DOTs have focused their statewide long-range planning efforts on maintaining the condition and operation of their existing assets. States must collect pavement condition and other data and annually report these data to FHWA's HPMS program, generally using SPR funds to pay for the data collection. States must also inspect and report on the condition of their bridges, generally every 2 years, through FHWA's National Bridge Inspection Program. As we previously reported, many states use bridge management systems for gathering and analyzing data on bridge conditions, such as structural adequacy and safety. These systems help states manage their bridge assets and more efficiently allocate limited resources among competing priorities.<sup>19</sup> For example, Pennsylvania DOT (PennDOT) and Montana DOT (MDOT) maintain road and bridge management systems to track the condition of pavement surfaces and the structural sufficiency of bridges. MDOT reported that information generated by these systems is used to track the actual performance of the highway system after investments are implemented, to show progress in meeting long-range goals.

**Conducting corridor studies.** In our survey, 34 state DOTs reported conducting regional and statewide corridor studies for the statewide planning process. Through corridor studies, state DOTs can focus their research on roadways with critical importance by monitoring variables such as traffic flow and congestion, trip time, and crash and safety data. Federal planning regulations encourage states to consider strategies to address corridors where congestion threatens the efficient functioning of the state's transportation system.<sup>20</sup> For example, officials with Colorado DOT reported that its long-range plan is corridor-based, in that the state

---

<sup>19</sup>GAO, *Highway Bridge Program: Condition of Nation's Bridges Shows Limited Improvement, but Further Actions Could Enhance the Impact of Federal Investment*, [GAO-10-930T](#) (Washington, D.C.: July 21, 2010).

<sup>20</sup>23 C.F.R. § 450.214(b).

---

worked with MPOs and RPOs across the state to define a vision for each of the 350 corridor segments in the state and to establish need categories for each corridor that consider financial abilities and limitations.

**Using transportation demand models.** In our survey, 29 state DOTs reported using a statewide transportation demand model, also known as a travel demand model, and about half of all state DOTs reported using such models to develop scenarios to inform their long-range statewide transportation plan. Used to forecast future travel demand, the models provide planners with important information on how population growth and proposed investments could affect the operation of the transportation system. Such models, however, are complex and require extensive technical capacity and current information on roadway and transit system characteristics and operations, as well as current and projected demographic information. According to stakeholders that we interviewed, some states do not have sufficient data to produce travel demand models that can be used to forecast future transportation needs across the state. Some of the highway performance data that states collect through FHWA's HPMS program could be useful for travel demand modeling—including data on population and land area, the number of vehicle miles traveled on some public roads, and the percentage of vehicle miles traveled by various vehicle types. Officials from one MPO we interviewed reported that statewide travel demand modeling is less valuable than such modeling in MPO areas, where congestion is a greater concern. To address modeling and other technical aspects of planning, the vast majority of state DOTs (45) reported that they procured contractor services in developing their statewide long-range plans.

## Long-Range Statewide Transportation Plan Elements

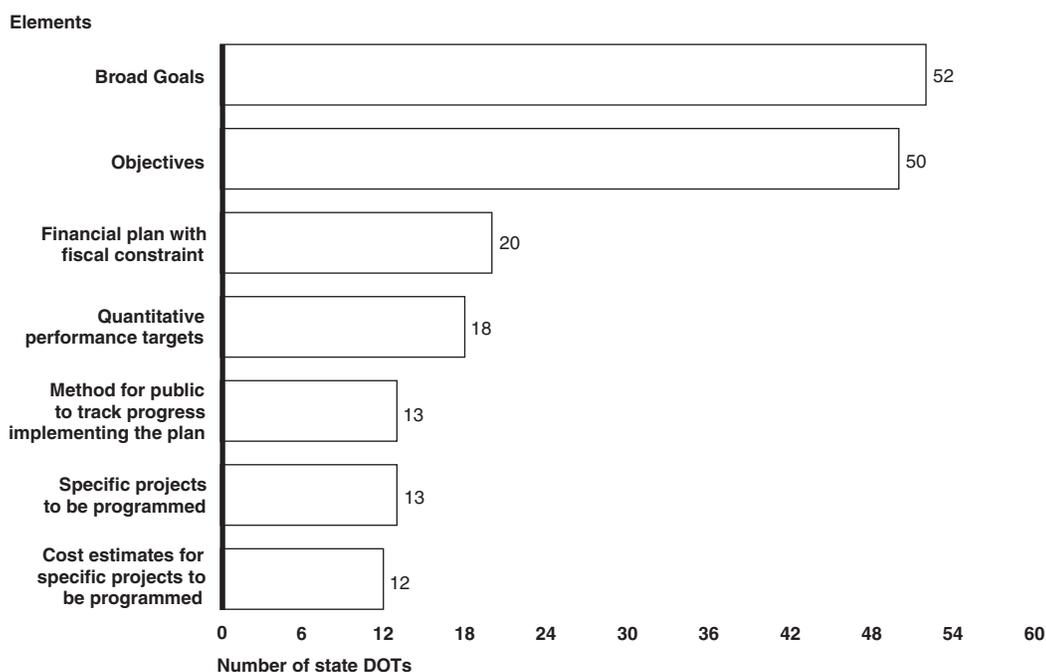
Nearly all state DOTs reported including broad goals and objectives in their long-range statewide transportation plans, but, according to our survey, many plans do not include quantitative performance targets and project-specific information, such as fiscally constrained financial plans, project lists, and cost estimates (see fig. 3). Although federal statutes or planning regulations do not require states to include quantitative performance targets in their long-range statewide transportation plans, some states reported including them, and we have previously reported that similar targets should be included in similar strategic plans developed by federal agencies.<sup>21</sup> In addition, project-specific information is not required

---

<sup>21</sup>GAO, *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, [GAO/GGD-10.1.20](#) (Washington, D.C.: April 1998).

to be included in long-range statewide transportation plans, although some states provide these elements in their plans.

**Figure 3: Selected Elements State DOTs Reported Including in Their Long-Range Statewide Transportation Plans**



Source: State DOT survey.

Note: State DOTs also indicated that their long-range statewide transportation plans provided additional elements that were not included in this figure. For example, 36 state DOTs reported that their long-range statewide transportation plans included a statewide freight transportation strategy, 34 state DOTs reported that their long-range statewide transportation plans included a statewide intermodal transportation strategy, and 23 state DOTs reported that their long-range statewide transportation plans identified regionally significant projects. See the e-supplement—[GAO-11-78SP](#)—for additional information.

**Broad goals and objectives.** All 52 state DOTs reported including broad state transportation goals, and nearly all (50) reported including objectives in their long-range statewide transportation plans. According to USDOT, goals represent the desired outcomes for the transportation system as a whole, and objectives are specific, measurable statements that identify what is to be accomplished in order to attain the goals.<sup>22</sup> Such goals and

<sup>22</sup>USDOT, FHWA, and FTA, *Statewide Opportunities for Integrating Operations, Safety, and Multimodal Planning: A Reference Manual*, FHWA-HEP-10-031 (Washington, D.C., May 2010).

---

objectives in long-range statewide transportation plans should lead to strategies and investments that support the attainment of objectives. Federal planning regulations do not establish specific national goals or desired outcomes for states to address in their long-range statewide transportation plans, although states must consider specific statutorily defined planning factors in their planning process.<sup>23</sup>

**Quantitative performance targets.** Fewer state DOTs (18) reported including quantitative performance targets to measure progress in achieving state transportation goals. Although quantitative performance targets are not federally required for long-range statewide transportation plans, the Government Performance and Results Act of 1993 (GPRA) requires federal agencies in their strategic plans to develop performance goals that are objective, quantifiable, and measurable, and to establish performance measures that adequately indicate progress toward achieving those goals.<sup>24</sup> Our guidance to federal agencies developing GPRA-required annual performance plans states that an agency’s performance goals and measures usually should include a quantifiable, numerical target level or other measurable value.<sup>25</sup> Although not required, performance targets within long-range statewide transportation plans could provide a performance standard by which the state DOT can demonstrate to the public what effect its investment decisions are having on achieving the goals established in the plan. Similarly, 13 state DOTs reported that their long-range statewide transportation plan provides a method for the public to track progress in implementing the plan. For example, PennDOT publishes an annual implementation report that details actions for achieving plan strategies and specific responsibilities and time lines for implementing the plan.

**Project-specific elements.** The majority of state DOTs reported that their long-range plans did not include project-specific information, such as a financial plan describing how the plan would be funded, project lists, or cost estimates. Specifically, fewer than half of all state DOTs (20) reported that their most recent long-range statewide transportation plan included a

---

<sup>23</sup>23 U.S.C. § 135(d) and 49 U.S.C. § 5304(d).

<sup>24</sup>Pub. L. No. 103-62, 107 Stat. 285 (Aug. 3, 1993). GPRA requires federal agencies to set multiyear strategic goals in their strategic plans and corresponding annual goals in their performance plans, measure performance toward the achievement of those goals, and report on their progress in their annual performance reports.

<sup>25</sup>[GAO/GGD-10.1.20](#).

---

financial plan demonstrating fiscal constraint. According to federal planning regulations, a financial plan demonstrates consistency between reasonably available and projected sources of federal, state, local, and private revenues and the costs of implementing proposed transportation system improvements. Although state DOTs are not required to provide a financial plan in the long-range statewide transportation plan, federal law requires MPOs to provide this information in their long-range, metropolitan transportation plan. Fewer state DOTs (13) reported that they include in their long-range plan a list of specific projects to be programmed, or cost estimates for those projects (12).

These survey results are consistent with the information provided by USDOT officials and stakeholders that we interviewed, who told us that many long-range statewide transportation plans are policy-based documents that provide broad, general goals for the state, but do not provide project-level information on how the state will achieve these goals. Similarly, federal planning regulations permit long-range statewide transportation plans to be comprised of policies, strategies, or both, but not necessarily specific projects, over the minimum 20-year forecast period. State DOT officials that we interviewed provided reasons for not including project-specific information in their long-range statewide transportation plan. For example, PennDOT officials reported that they do not include such information because they do not want to duplicate or override the projects included in metropolitan transportation plans where such elements are required. USDOT officials reported that the decision whether to provide project-specific information in long-range statewide transportation plans offers trade-offs to states. For example, including projects in long-range plans can provide a greater level of transparency into the state's project selection process; however the public may see these plans as the final decision-making process, giving state DOTs less flexibility to alter the plan in the future.

---

### State DOTs Conduct Several Research and Funding Allocation Activities to Develop the STIP and Base Project Selection on a Range of Factors

In developing a STIP—the list of projects prioritized by the state to receive federal funding over a 4-year period—state DOTs reported performing several activities to assess transportation needs and determine funding allocation amounts. After completing these activities, state DOTs reported they base their selection of projects on a range of factors, including funding availability and priorities established by the governor, as well as political and public support for specific projects.

---

---

## STIP Development Activities

**Research to assess needs.** State DOTs commonly reported assessing their transportation needs by using available transportation data and by meeting with local officials in state regions—activities that they also reported performing in developing their long-range statewide transportation plans. Forty-three state DOTs reported reviewing the condition of existing transportation assets to identify those with the greatest need, and the same number of state DOTs also reported meeting with local officials in state regions to determine needs.<sup>26</sup> For example, MDOT officials reported that Montana uses a “Performance Programming Process” to assess areas of need based on pavement, bridge, highway-safety and congestion data collected by the state. The planners use the data to develop an optimal funding allocation program based on needs, and district engineers, in consultation with local elected officials across the state, nominate projects for inclusion in the STIP.

**Allocating funding.** Through our survey and interviews with state DOT officials, we found that state DOTs used a combination of approaches to determine how to allocate available funding across competing transportation needs and state regions. For example, 47 state DOTs reported allocating funding across different project types, such as bridge or road maintenance, or transit projects. Forty state DOTs reported allocating transportation funding across geographic regions based on need, and 35 reported using predetermined formulas to allocate funding to different regions in the state. Although formula allocations may help states decide how to distribute funding across competing regions, we have previously reported that the use of formulas to distribute federal highway funds to states results in federal allocations that have only an indirect relationship to needs and no relationship to performance or outcomes.<sup>27</sup> In some cases, state DOTs use formula allocations that consider needs to distribute STIP funding. For example, PennDOT officials said that, as a general rule, they attempt to allocate at least 80 percent of state and federal transportation funding toward preservation and maintenance activities, while applying much of that funding toward reducing the number of structurally deficient bridges in the state. Within its bridge program, PennDOT uses formulas to distribute federal and state funding to planning regions based on the percentage of bridge deck area in the region

---

<sup>26</sup>As discussed, 46 state DOTs reported inventorying the condition of existing transportation assets when developing their long-range statewide transportation plans.

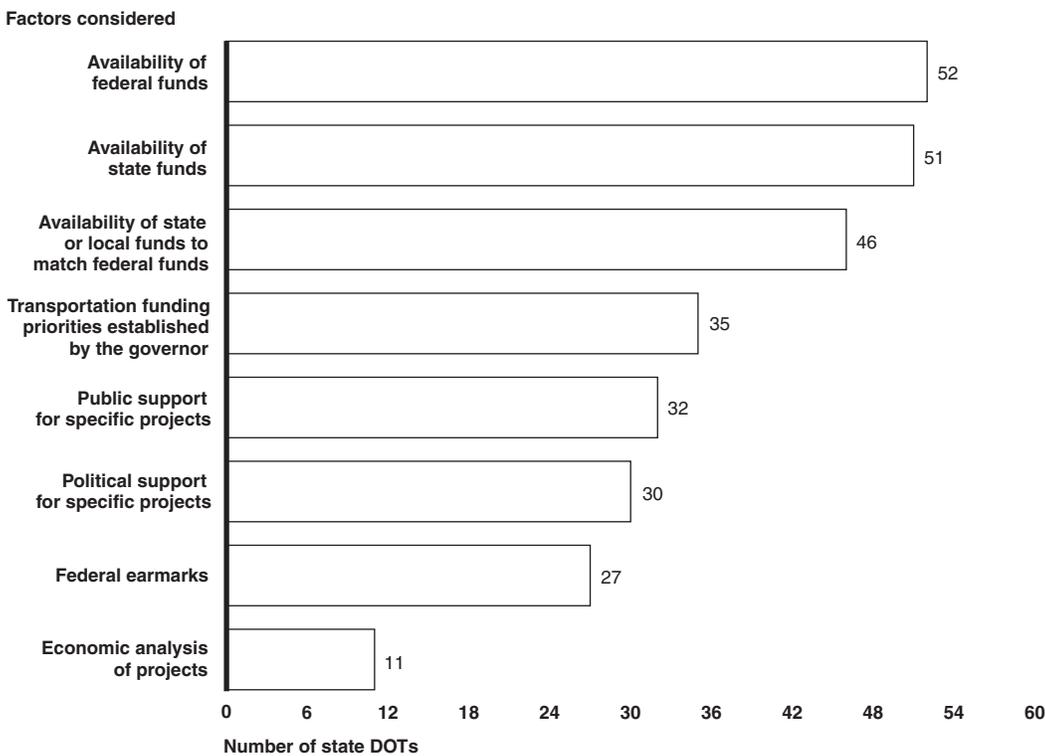
<sup>27</sup>[GAO-08-400](#).

considered to be structurally deficient, with a goal of allocating 85 percent of bridge money to improve structurally deficient bridges.

### STIP Project Selection Factors

State DOTs reported that they select projects for inclusion in their STIP based on a range of factors, but funding availability and political and public support were of greater importance than the results of economic analysis of a transportation project’s benefits. Economic analysis was one of the factors that state DOTs cited less often as important in selecting STIP projects (see fig. 4). In addition, state DOTs must incorporate the approved TIPs of MPOs within the state, without change, into the STIP.

**Figure 4: Selected Factors State DOTs Reported Were of Great or Very Great Importance in Decisions to Include Projects in the STIP**



Source: State DOT survey.

Note: Data collected for additional categories were not included in this figure. See the e-supplement—[GAO-11-78SP](#)—for additional information.

**Funding availability.** Nearly all state DOTs reported that the availability of federal and state funds was of great or very great importance in determining which projects to include in the STIP, as the amount of

---

funding that is available determines the number and scale of projects that the state can undertake. As noted in our prior work, although transportation revenues have, until recently, increased in nominal terms, the federal and state motor fuel tax rates have not kept up with inflation; and the purchasing power in real terms of revenues generated by federal and state motor fuel taxes has been declining since 1990.<sup>28</sup> Consequently, state and regional transportation decision makers in recent years have devoted more funding to highway investments that preserve, enhance, and maintain existing infrastructure than to investments that add capacity. Most state DOTs (46) also cited the availability of state or local funds to match federal funds as being of great or very great importance in selecting STIP projects. For example, West Virginia DOT (WVDOT) officials told us that WVDOT is responsible for maintaining 92 percent of the road miles in the state, and because many of the counties in the state are economically distressed they are unable to provide a local match for local road improvements.

**Governor's priorities and political and public support.** About two-thirds (35) of state DOTs also identified the governor's funding priorities as a factor of great or very great importance in selecting transportation projects. For example, Pennsylvania's governor set a goal to reconstruct or replace 1,145 bridges in the state by 2010, and PennDOT's most recent STIP indicates that in fiscal year 2009, PennDOT allocated almost half of its STIP funding toward bridge projects. Other STIP project selection factors that more than half of state DOTs cited as being of great or very great importance were public (32) and political (30) support for specific transportation projects. For example, in interviews with officials at Washington state DOT, we learned that the state legislature increased state gas tax revenues by 5 cents per gallon in 2003 and by 9.5 cents per gallon over a 4-year period in 2005, raising about \$11 billion for highway, bridge, ferry, and other improvements. To help raise support for the tax increases, state legislators needed to identify for voters the specific projects to be funded with the tax revenues, and the legislature, with assistance from the Washington state DOT, wrote the projects into the state legislation.

**Federal earmarks.** The majority of state DOTs (27) also reported that federal earmarks, also known as congressional directives, were of great or

---

<sup>28</sup>GAO, *Surface Transportation: Strategies Are Available for Making Existing Road Infrastructure Perform Better*, GAO-07-920 (Washington, D.C.: July 26, 2007).

---

very great importance in selecting STIP projects.<sup>29</sup> In 2007, the USDOT Inspector General reported that SAFETEA-LU included a total of 7,808 earmarks for fiscal year 2006 for FHWA and FTA programs, accounting for just more than \$8 billion.<sup>30</sup> FHWA and FTA provide such funds through grants to state and local agencies, which then must include the earmarked projects in the STIP to be implemented.<sup>31</sup> In prior work on the administration of federal earmarks within USDOT and other federal agencies, FHWA and FTA officials reported that earmarks can sometimes displace higher priority projects with lower priority projects in order to comply with these earmarks.<sup>32</sup> In our review, FHWA officials in one division office told us that some projects funded through federal earmarks may circumvent the statewide planning process by funding projects that are not state priorities. In addition, federal earmarks may provide only partial or initial funding for a project, leaving the state and local governments to obtain future funding to complete a project and cover future maintenance costs.

**Economic analysis.** In our survey, we found that economic analysis was one of the factors that state DOTs cited less often as important in selecting STIP projects (see fig. 4). Eleven state DOTs reported that the results of economic analyses of STIP projects—such as benefit-cost, cost-effectiveness, or economic-impact analysis—were of great or very great importance in selecting projects.<sup>33</sup> According to FHWA guidance, economic analysis takes a long-term view of infrastructure performance

---

<sup>29</sup>In general, an earmark is a congressional directive in legislation to a federal agency to spend a specific amount of its budget for a specific entity, project, or service. See GAO, Office of the General Counsel, *Principles of Federal Appropriations Law 3<sup>rd</sup> Edition*, vol. 2 (Washington, D.C.: February 2006).

<sup>30</sup>USDOT, Office of Inspector General, *Review of Congressional Earmarks within Department of Transportation Programs* (Washington, D.C., Sept. 7, 2007).

<sup>31</sup>FHWA division offices and FTA regional offices administer and obligate funds for projects to grant recipients and respond to questions from recipients on issues related to eligibility and transferability, among other things.

<sup>32</sup>GAO, *Congressional Directives: Selected Agencies' Processes for Responding to Funding Instructions*, GAO-08-209 (Washington, D.C.: Jan. 31, 2008)

<sup>33</sup>The economic analyses referred to in our survey were (1) benefit-cost analysis, used to identify the alternative with the greatest net benefit by comparing the monetary value of benefits and costs of each alternative; (2) cost-effectiveness analysis, used to identify the lowest cost alternative for achieving a level of benefit by comparing the costs of each alternative; and (3) economic impact analysis, used to identify the impact of alternatives on the local, regional, or national economy by measuring the effects derived from each alternative.

---

and costs and enables state DOTs to target scarce resources to the best uses (those that maximize benefits to the public) and to account for their decisions.<sup>34</sup> In the planning process, economic analysis can be applied with collected performance data to make project selection more performance based by screening project alternatives based on expected performance benefits—such as reductions in travel time—with expected costs for implementing an alternative. In prior work, we found that state DOT decisions about transportation investments are based on many things besides the results of economic analysis of a project’s benefits and costs, such as the availability of funding or public perception of a project.<sup>35</sup> Although federal planning regulations do not specify analytical tools to be applied for evaluating project merits—nor do they require that the most cost-beneficial projects be chosen—such analyses, when combined with other selection factors, including needs expressed by the community and local officials, can result in better-informed transportation investment decision-making.

USDOT has taken steps in recent years to encourage states to conduct economic analyses, including benefit-cost analysis, to plan for new transportation investments. For example, the American Recovery and Reinvestment Act of 2009 appropriated approximately \$1.5 billion for competitively awarded surface transportation projects intended to have a significant impact on the nation, a metropolitan area, or a region.<sup>36</sup> USDOT distributed this funding through its Transportation Investment Generating Economic Recovery (TIGER) grant program. In administering the TIGER program, USDOT generally required state and other grant applicants to conduct benefit-cost analyses that compared a project’s expected benefits to its costs, by measuring factors such as the project’s impact on fuel savings, travel time, greenhouse gas emissions, water quality, and public health. Although we have not reviewed the economic analyses performed by states as part of this work, according to USDOT, grant requests were not approved if USDOT concluded that project costs would likely exceed public benefits.

---

<sup>34</sup>USDOT, FHWA, Office of Asset Management, *Economic Analysis Primer* (Washington, D.C., August 2003).

<sup>35</sup>GAO, *Highway and Transit Investments: Options for Improving Information on Projects’ Benefits and Costs and Increasing Accountability for Results*, [GAO-05-172](#) (Washington, D.C.: Jan. 24, 2005).

<sup>36</sup>Pub. L. No. 111-5, Division A, Title XII, 123 Stat. 115, 203 (Feb. 17, 2009).

---

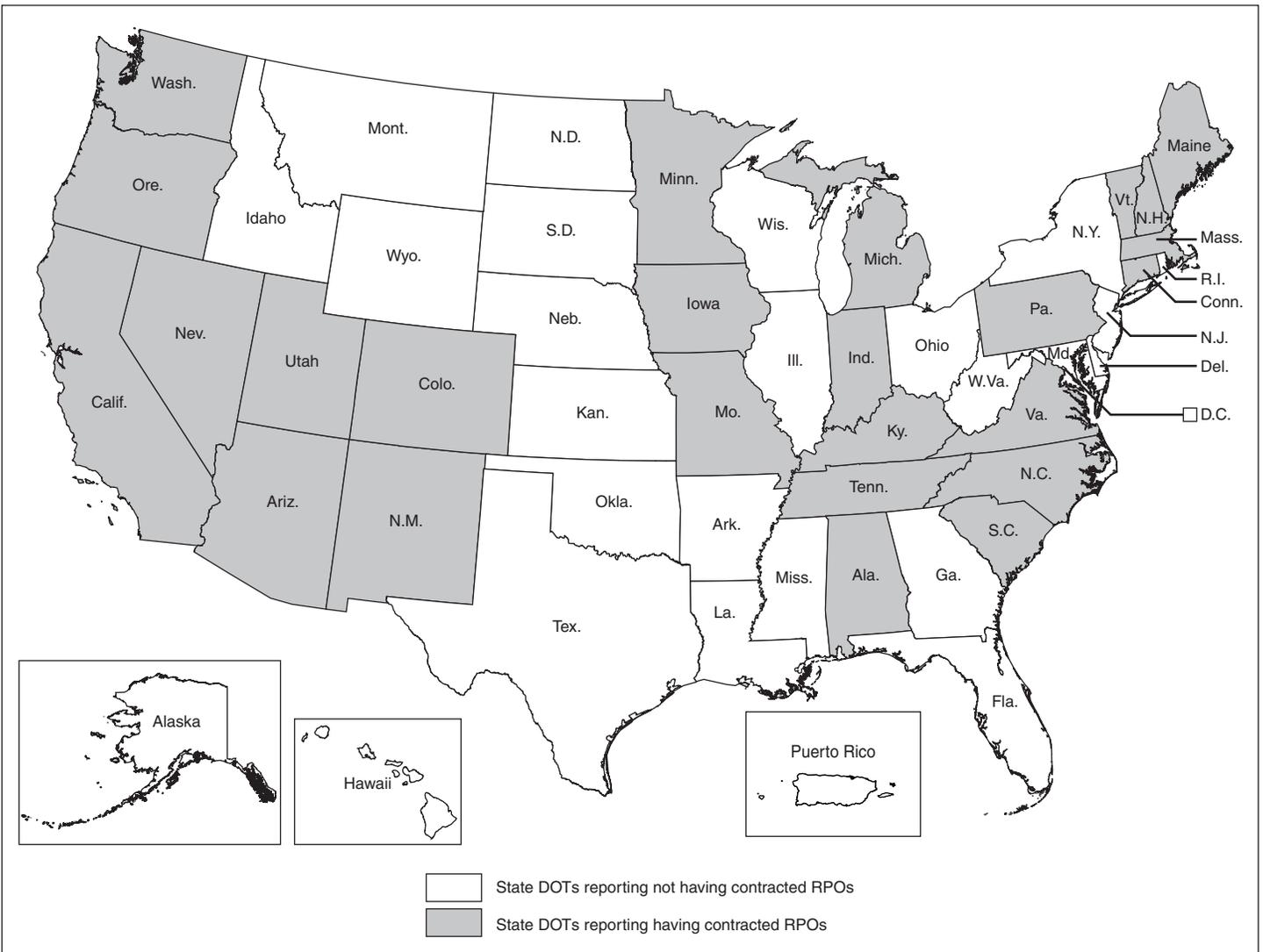
States Use Several Methods to Consult with Nonmetropolitan Local Officials, and the Majority of Surveyed RPOs Are Satisfied That State DOTs Sufficiently Consider Their Needs

State DOTs reported using several methods to consult with nonmetropolitan local officials during the statewide planning process. Many state DOTs reported consulting directly with local elected officials, while others reported relying on RPOs to consult with nonmetropolitan local officials. In some cases, states reported that they both consult directly with local elected officials and use RPOs.

**Direct consultation.** The majority of state DOTs reported that they consult directly with nonmetropolitan local officials. For example, 39 state DOTs reported that they hold annual planning meetings with nonmetropolitan local officials in their state. For example, state DOT and local planning officials told us that these meetings may occur either in a series of formal state DOT presentations at various locations throughout the state (often referred to as road shows) or less formally through regular interactions between state DOT district engineers and local elected officials on an as-needed basis. According to local officials in three of the states we visited, the quality of this direct consultation can vary. For example, an official for an organization representing councils of government in one state said that each state DOT transportation district has a separate consultation process, which is effective in some districts but not in others. In another state, local officials said that their state DOT's road show, which the state uses as a way to consult with local officials, was not an effective form of consultation because many of the decisions on transportation projects had already been made by state DOT headquarters officials.

**Consultation through RPOs.** Fewer states reported using RPOs to fulfill consultation requirements or to perform specific planning consultation activities at the local level. In some cases, states have formalized their relationships with these organizations through written contractual agreements, while in other cases, they have no formal agreements in place. Almost half of all state DOTs (25) reported having written contractual agreements with RPOs to consult with local officials in nonmetropolitan areas (see fig. 5). Fifteen state DOTs reported that they gave their RPOs a role in the planning process by requiring the RPOs to develop their own long-range plans or TIPs. In addition to the 25 state DOTs that reported having written contractual agreements with RPOs, 11 state DOTs reported that other organizations conduct rural transportation planning activities in their state without a contract. (For more information on RPO characteristics and activities, see app. II.)

**Figure 5: State DOTs That Reported Having Written Contractual Agreements with RPOs**



Sources: State DOT survey and Map Resources (map).

Stakeholders and officials we interviewed offered some potential reasons for the greater prevalence of RPOs in some states and described some of the benefits of RPOs. For example, one stakeholder said that RPOs are more prevalent in nonmetropolitan regions with growing populations that require a coordinated planning effort to manage growth. A state DOT official in one state with a slowly growing population added that the state DOT does not see much need for formal consultation organizations

---

---

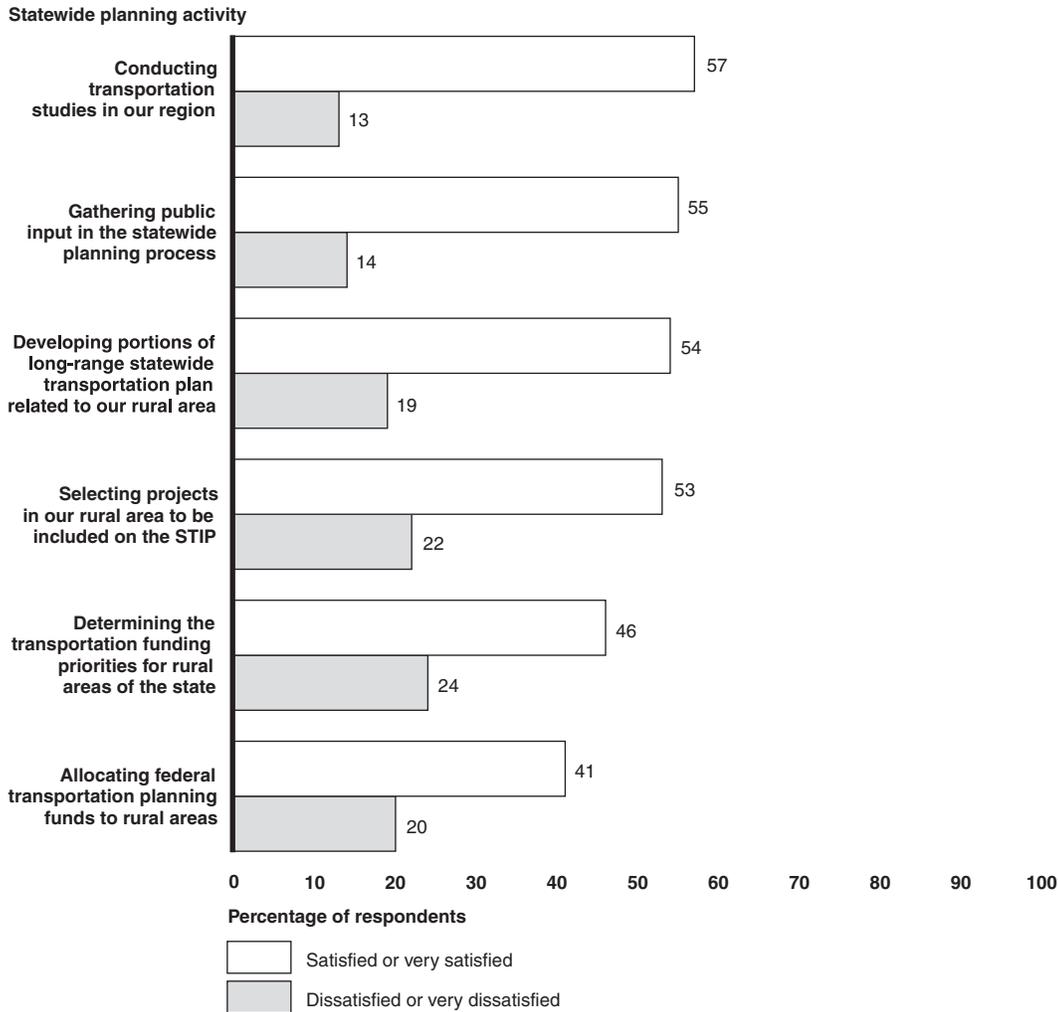
RPO Views on the Extent to Which Rural Transportation Needs Are Considered

because the state's slow population growth creates relatively little demand for consultation on new transportation projects. Stakeholders that we interviewed reported that RPOs help state DOTs carry out their responsibility for consulting with local nonmetropolitan officials by, for example, (1) helping competing jurisdictions develop consensus on and prioritize regional transportation projects to be included in the STIP, (2) facilitating state DOT consultation with elected officials from multiple local governments, and (3) helping state DOTs better anticipate project challenges such as issues with environmental reviews for implementing projects.

In our separate survey of RPOs, 63 percent reported that they were either satisfied or very satisfied that the state DOT's consultation process gave their transportation needs sufficient consideration. In general, RPOs reported more satisfaction than their counterparts if they had helped prioritize rural projects for their area or had received planning funds or a written contractual agreement from their state DOT.

Through our survey, we also asked RPOs about their participation in certain state DOT planning activities. The majority of respondents with relevant experience reported being satisfied or very satisfied with their ability to participate in several state DOT research and outreach planning activities; however, the RPOs that responded expressed lower levels of satisfaction with their participation in other activities, including those that involve prioritizing or allocating funds for rural areas (see fig. 6).

**Figure 6: Percentages of RPOs That Reported Satisfaction and Dissatisfaction with Their Ability to Participate in Selected Statewide Planning Activities**



Source: Regional planning and development organization survey.

Note: Data collected for additional categories were not included in this figure. See the e-supplement—[GAO-11-78SP](#)—for the complete list of frequencies for each survey question. Some survey respondents indicated that they were neither satisfied nor dissatisfied with their participation in these activities, and that information is not included in this figure.

RPO officials we interviewed in some states expressed varying degrees of satisfaction with their ability to participate in statewide planning activities. For example, RPO officials in one state that reported having written contractual agreements with its RPOs, reported that the state DOT was

---

generally receptive to the projects that the RPO included in their TIP and made efforts to ensure that RPO projects were considered for funding. RPO officials in this state said that the state DOT and the RPOs work together early in the planning process to agree on the statewide funding priorities. RPOs then use this information to develop projects that address the statewide priorities. However, in another state, where the RPOs also had written contractual agreements with the state DOT, an RPO official said that, although RPOs are required to develop both long- and short-range transportation plans for their regions, the state DOT does not necessarily use their project recommendations to select STIP projects. Other RPO officials said that they did not know how the state DOT ultimately selected its STIP projects and that they were unable to influence decision-making to ensure their RPO's needs were considered.

---

## Funding, Public Involvement, and Administrative Requirements Are the Primary Challenges in Statewide Planning

---

### State DOTs Report Facing Funding Challenges in Developing Long-Range Plans and STIPs

In our survey, we asked each of the 52 state DOTs, including Washington, D.C. and Puerto Rico, to identify the top three challenges that they encountered in developing both their long-range statewide transportation plans and their STIPs.<sup>37</sup> When we combined the state DOTs' responses for both plans, two funding challenges emerged as the state DOTs' top challenges: (1) insufficient funds from federal or state and local sources to meet their transportation project needs and (2) funding and cost uncertainty—including uncertainty forecasting future revenues and costs for implementing transportation projects. However, these funding challenges are the result, at least in part, of revenue decisions made at the state and local levels. For example, one strategy that Congress has used to meet the goals of the Federal-Aid Highway Program has been to increase

---

<sup>37</sup>See appendix I for the process that we used to identify planning challenges.

---

federal investment.<sup>38</sup> However, as we have previously reported, states and localities are permitted to use increased federal funds to substitute for or replace what they otherwise would have spent from state resources. As a result, not all of the increased federal investment has increased the total investment in highways.<sup>39</sup>

**Transportation needs outweigh available funds.** Seventeen state DOTs cited insufficient funds to meet state-defined transportation project needs as being among their most significant challenges in developing the long-range statewide transportation plan and 22 state DOTs cited insufficient funds to meet project needs as being among their most significant STIP development challenges.<sup>40</sup> In both cases, the state DOTs were referring to funding available to implement projects, not to conduct statewide planning activities. DOT officials from several states said that their transportation needs outweighed their existing revenue, in part because of reduced or stagnant revenues from state gas taxes coupled with demand for maintaining aging transportation infrastructure. Several state DOTs reported that insufficient funding requires planners to make difficult trade-offs between preserving existing assets and modernizing transportation networks to address future concerns such as increased congestion or livability and mobility. FTA officials reported that because of insufficient funds for transit, there are few large transit expansion projects in development across the country.<sup>41</sup> Consequently, most planning for transit occurs within the transit agencies as they look for ways to reconfigure their existing routes to adapt to population patterns and maximize service levels for existing routes.

---

<sup>38</sup>For example, the Transportation Equity Act for the 21st Century's authorization of \$171 billion for the Federal-Aid Highway Program from fiscal years 1998 through 2003 represented an increase of 41 percent over the \$121 billion authorized in the prior 6-year bill. See GAO, *Federal-Aid Highways: Trends, Effect on State Spending, and Options for Future Program Design*, [GAO-04-802](#) (Washington, D.C.: Aug. 31, 2004).

<sup>39</sup>[GAO-04-802](#).

<sup>40</sup>Insufficient funds was the most frequently cited STIP development challenge. It was also the third most frequently cited long-range planning challenge, after involving the public, which was identified by 20 state DOTs, and data limitations, identified by 18 state DOTs.

<sup>41</sup>For some FHWA and FTA programs, for example, FHWA's Surface Transportation Program, and Congestion Mitigation and Air Quality Improvement Program, and FTA's Urbanized Area Formula Grants, funding for eligible activities may be used for either highway or transit programs. For these programs, states may transfer, or flex, certain funding among some programs, and between FHWA and FTA.

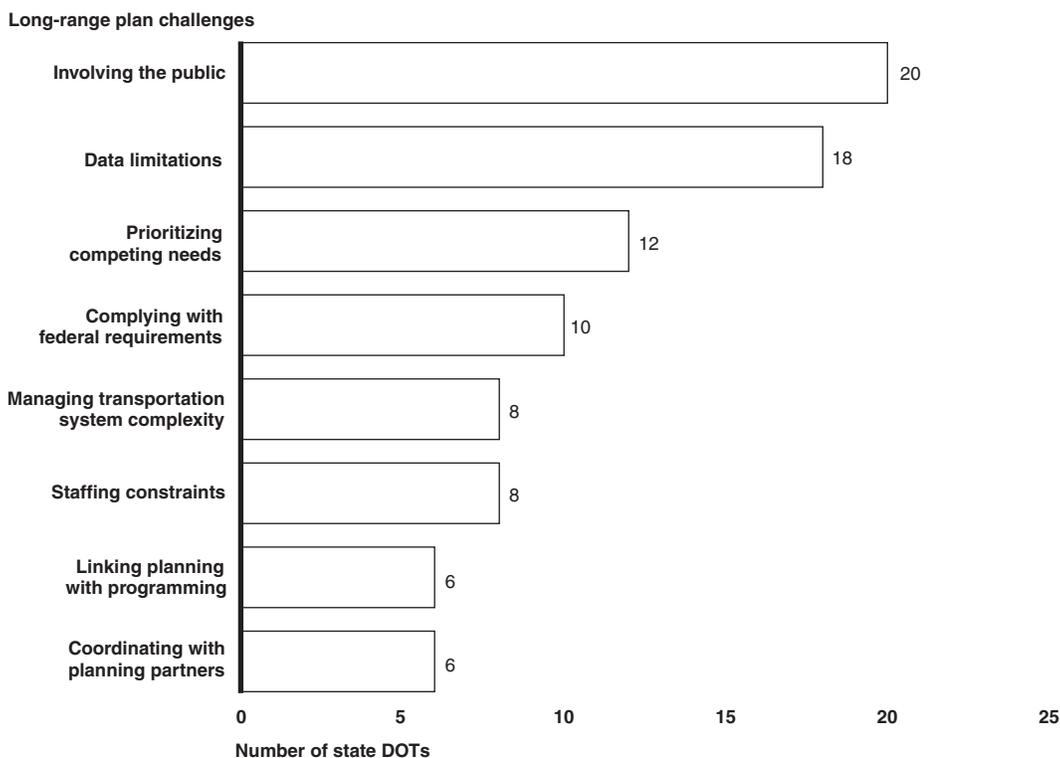
---

**Funding and cost uncertainty.** Seventeen state DOTs cited funding and cost uncertainty as a significant long-range planning challenge, and 15 state DOTs cited it as a significant STIP development challenge. In survey responses and interviews, officials from several state DOTs reported that uncertain funding levels from both federal and state sources hindered their ability to address long- and short-range planning needs. For example, officials from one state DOT reported that funding uncertainty is a particular challenge as many transportation projects span multiple years and thus require careful long-range planning to prevent exhaustion of funding prior to their completion. Officials from several state DOTs reported that a lack of a federal surface transportation authorization also contributed to funding uncertainty. Furthermore, USDOT officials reported that some state legislatures place restrictions on how state gas tax funds may be spent, which limits states' flexibility in allocating their limited budgets from year to year. Several other state DOTs reported that they experienced challenges developing accurate cost estimates for projects, especially when developing the STIP. For example, officials in one state reported that, until recent years, planners did not have access to useful cost estimating tools to project future project costs. Without such cost-estimating tools, officials reported that project selection and funding decisions were made outside the planning process and subject to political interests. Officials reported that the state has recently made investments to upgrade its cost-estimating capabilities to prioritize the most cost-effective and greatest need pavement and bridge projects; thereby improving the role of planning to inform project selection decisions.

## State DOTs Face Challenges Involving the Public, Addressing Data Limitations, and Other Long-Range Issues

In addition to funding challenges, state DOTs identified several significant long-range planning challenges. Twenty state DOTs reported that involving the public in the long-range planning process was a significant challenge. In addition, 18 state DOTs cited data limitations—including insufficient data and challenges analyzing and modeling data—as a significant long-range planning challenge. Fewer state DOTs identified prioritizing competing needs, complying with federal requirements, and other issues as significant long-range planning challenges (see fig. 7).

**Figure 7: Number of State DOTs That Identified the Following among Their Most Significant Challenges Encountered in Developing the Long-Range Statewide Transportation Plan**



Source: State DOT survey.

Note: In addition to the challenges provided in this figure, state DOTs commonly identified funding challenges in developing the long-range statewide transportation plan, as noted previously in this report. Specifically, 17 state DOTs identified both insufficient funding and funding and cost uncertainty as significant challenges faced in developing the long-range statewide transportation plan.

**Involving the public.** Through our survey and interviews, state DOTs identified several challenges encountered in involving the public in long-range planning, as well as several activities commonly used by states to

---

improve public involvement. First, several state DOTs reported that they experienced challenges in getting the public to attend long-range planning outreach sessions, in part because of the long-range plan's 20-year horizon and, in some cases, a lack of project-specific information. For example, in developing its current long-range statewide transportation plan, one state DOT reported that it held about 20 public meetings and workshops across the state; however, less than a dozen members of the public attended meetings in some rural areas of the state. Another state DOT reported that the methods it used to solicit public feedback—public notices or display ads in newspapers—were ineffective because of reduced newspaper readership and constraints on spending to purchase such ads.

State DOTs reported conducting a variety of activities to address the challenge of involving the public. In particular, 46 state DOTs reported maintaining a Web site to provide public information and receive public feedback on the long-range statewide transportation plan, and slightly fewer (42) reported presenting their long-range statewide transportation plan in a statewide road show. States also reported that they took steps to involve hard-to-reach populations and special interests. For example, 39 state DOTs reported that they reached out to special needs populations—including low-income, disabled, and elderly residents—and 37 state DOTs reported holding meetings with freight industry representatives on their long-range plan. To identify transportation needs for nonmetropolitan areas of the state when developing the long-range plan, 37 state DOTs reported that they tasked DOT personnel or contractors to perform this activity, and fewer (24) relied on RPOs to identify such needs.

**Data limitations.** State DOTs identified several types of data limitations as a significant challenge in developing the long-range statewide transportation plan. Specifically, 13 state DOTs identified analyzing and modeling existing data as a significant challenge, and 5 state DOTs identified insufficient data as such a challenge. For example, 3 state DOTs reported challenges gathering or making use of truck freight data in developing the long-range statewide transportation plan, such as in segregating freight trips from passenger traffic in analyzing corridor studies. Other long-range planning data challenges identified by state DOTs include the costliness of collecting data, retaining adequate staff, a lack of analytical tools to model and analyze data, and developing and using performance measures in the long-range statewide transportation plan.

**Other long-range planning challenges.** Among the other long-range planning challenges identified, 12 state DOTs reported that prioritizing

---

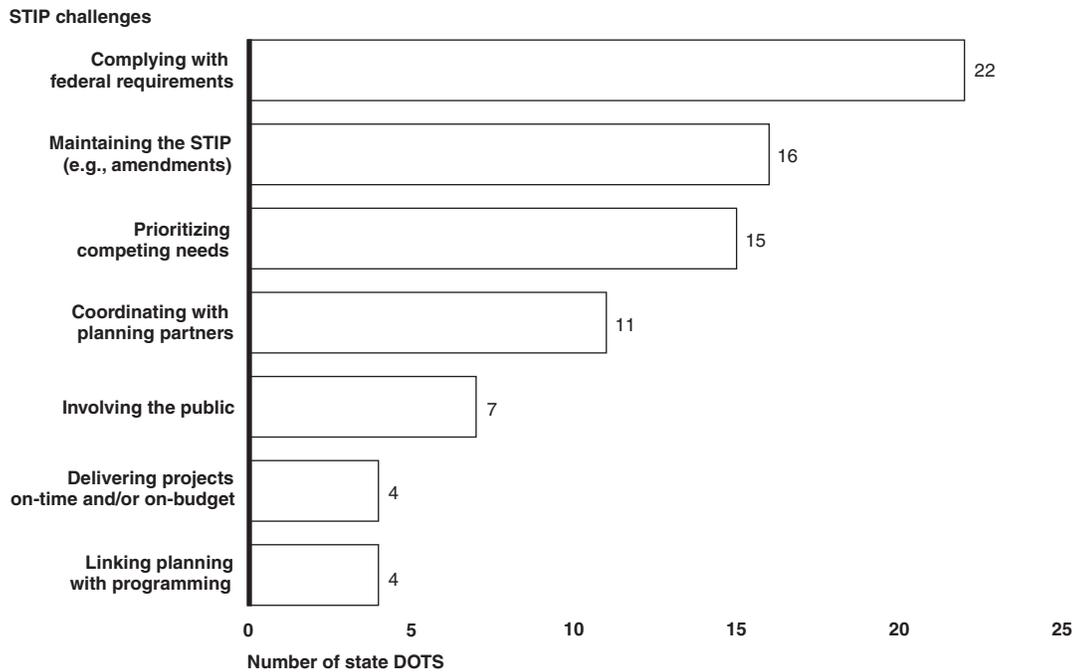
competing needs—such as the needs of urban and rural areas—was a significant challenge. For example, in interviews with state DOT officials and other stakeholders, we learned that rural areas are likely to advocate for corridor projects or improvements to support economic development in their region, while urban areas often focus on reducing congestion or adding capacity. Eight state DOTs reported facing staffing challenges, including 2 state DOTs that reported they have insufficient staff to address the long-range statewide transportation plan among their other planning activities.

---

**State DOTs Face Compliance, Administrative, and Other Challenges in Developing the STIP**

In addition to funding challenges, almost half of state DOTs (22) cited complying with federal requirements, including demonstrating fiscal constraint and others, as a significant STIP development challenge. Fewer state DOTs (16) identified administrative challenges with maintaining the STIP, including updating the STIP to reflect amendments or other modifications, as a significant challenge. Other frequently mentioned STIP challenges were prioritizing competing needs—a commonly cited long-range planning challenge—and coordinating with planning partners, such as MPOs or RPOs (see fig. 8).

**Figure 8: Number of State DOTs That Identified the Following among Their Most Significant Challenges Encountered in Developing the STIP**



Source: State DOT survey.

Note: Complying with federal requirements includes demonstrating fiscal constraint (identified by 13 state DOTs) and other federal requirements (identified by 9 state DOTs). In addition to the challenges provided in this figure, state DOTs also commonly identified several funding challenges in developing the STIP, as noted previously in this report. Specifically, 22 state DOTs identified funding insufficiency, 15 state DOTs identified funding and cost uncertainty, and 5 state DOTs identified funding inflexibility as significant challenges faced in developing the STIP.

**Complying with federal requirements.** A total of 22 state DOTs cited challenges related to complying with federal requirements in developing the STIP. In particular, 13 state DOTs cited challenges demonstrating fiscal constraint—a federal requirement that states demonstrate that all projects on the STIP can be implemented using committed, available, or reasonably available revenue sources. Two stakeholders that we interviewed reported that some FHWA division offices interpret the fiscal constraint rule rigidly and require states to provide very detailed cost and revenue estimates, while others allow for greater flexibility in their review to account for limitations in developing accurate estimates of future revenues and project costs. Despite the challenge that demonstrating fiscal constraint presents to state DOTs, FHWA officials reported that it serves an important accountability and transparency function in that it requires states to set

---

reasonable expectations among MPOs and the public about which projects can be implemented given available revenues. In addition to challenges with demonstrating fiscal constraint, 9 state DOTs cited complying with other planning requirements—such as ensuring that a state’s MPOs complete required air-quality conformity analyses—as a significant challenge.

**Maintaining the STIP.** About a third of state DOTs (16) reported that maintaining the STIP (e.g., amending the STIP as changes occur) was a significant administrative challenge. Federal planning regulations allow states to add or delete projects on the STIP or to revise project cost estimates at any time. In general, major changes to STIP project costs, initiation dates, or scope are known as amendments, and minor changes are considered administrative modifications.<sup>42</sup> STIP amendments require the state DOT to provide a public comment period and demonstrate that the STIP remains fiscally constrained for FHWA and FTA approval.<sup>43</sup> According to data collected by FHWA division offices, in fiscal year 2009 some states made a substantial number of amendments to their STIPs for that year. For example, FHWA’s New York Division reported that it approved more than 2,000 amendments to the New York DOT’s STIP in fiscal year 2009, and FHWA’s Pennsylvania Division office approved 500 amendments to PennDOT’s STIP for that same year. According to FHWA officials we interviewed, states often have good reasons for making such amendments—particularly in fiscal years 2009 and 2010, when states needed to plan projects for significant amounts of federal funding made available by the American Recovery and Reinvestment Act of 2009. Furthermore, some states, such as New York and Pennsylvania, have more assets and older infrastructure than other states, which could necessitate more frequent maintenance and repairs and STIP amendments, according to FHWA officials.

**Other STIP challenges.** Almost a third of state DOTs (15) reported that prioritizing competing needs was a significant STIP development challenge—a challenge also identified by 12 states in developing their long-range statewide transportation plans, as previously reported. Fewer states cited coordinating with planning partners (11) as a significant challenge. For example, in our survey 1 state DOT reported that it has 27

---

<sup>42</sup>See 23 C.F.R. § 450.104 and 23 C.F.R § 450.216(n).

<sup>43</sup>Administrative modifications to the STIP do not have these requirements and are therefore less burdensome administratively.

---

planning partners, including MPOs and RPOs that develop their own TIPs and are responsible for programming some federal-aid highway funds in their own regions. The state reported that it is challenging to coordinate the development of 27 TIPs and consolidate those projects into one STIP. Other less frequently cited STIP development challenges by state DOTs include involving the public (7), delivering transportation projects on time and on budget (4), and linking planning and programming (4).

---

## USDOT Has Limited Oversight Authority of Long-Range Statewide Transportation Plans, and STIP Oversight Focuses on Process

---

### USDOT Has Limited Oversight Authority of Long-Range Statewide Transportation Plans, and Some States' Plans Are Updated Infrequently

USDOT has limited oversight authority over long-range statewide transportation plans. Federal planning regulations require states to continually evaluate, revise, and periodically update the long-range statewide transportation plan; however, regulations do not prescribe a schedule or time frame for those updates. In addition, although USDOT is not required to review or approve long-range statewide transportation plans, states must provide copies of any new or amended long-range statewide transportation plans to USDOT for informational purposes.<sup>44</sup> This requirement differs from the requirement for MPOs in developing the long-range metropolitan transportation plan, which must be updated on a predetermined schedule every 4 or 5 years.<sup>45</sup>

Through our survey, we found that state DOTs vary in how often they update their long-range statewide transportation plan, and some states reported infrequent updates. Twenty-one state DOTs reported issuing an

---

<sup>44</sup>23 C.F.R. § 450.214(p).

<sup>45</sup>Through the enactment of SAFETEA-LU in August 2005, Congress statutorily established time frames for updating metropolitan transportation plans. MPOs are required to review and update the metropolitan transportation plan at least every 4 years in air quality nonattainment and maintenance areas and at least every 5 years in attainment areas.

updated long-range statewide transportation plan within 5 years of their previously issued plan. However, 18 state DOTs reported taking between 6 and 10 years to update their plan, and 7 state DOTs reported taking 11 years or more to do so (see fig. 9).<sup>46</sup> Five other state DOTs reported that they had issued one plan and had thus never updated that plan. Of those state DOTs that reported updating their plan at least once, the average amount of time between updates was about 7 years. However, the amount of time reported between updates varied considerably, from 2 years to as many as 18 years.

**Figure 9: Number of Years between Updates of the Long-Range Statewide Transportation Plan as Reported by State DOTs**



Source: State DOT survey.

Note: This figure is based on the 46 state DOTs that reported having updated their long-range statewide transportation plan at least one time. Five state DOTs reported that they had only issued one long-range statewide transportation plan and had never updated that plan. One state DOT did not provide information as to whether they had ever updated their current long-range statewide transportation plan. See the e-supplement—[GAO-11-78SP](#)—for additional information.

State DOT and USDOT officials offered several reasons for infrequently updating the long-range statewide transportation plan: (1) two state DOTs reported they have insufficient staff to address the long-range statewide transportation plan among their other planning priorities; (2) one state DOT reported that it had updated its plan, but the plan was not adopted by the state’s transportation commission and legislature; and (3) USDOT officials said some states issue what they referred to as policy-based plans

<sup>46</sup>One state DOT did not indicate whether it had issued more than one long-range plan.

---

that are not updated regularly because they do not include projects and therefore do not change much over time. USDOT officials suggested that if state DOTs were required to include project-specific information in their plans, plans would likely be updated more regularly.

State DOT and FHWA officials reported that periodic updates to the long-range statewide transportation plan offer important benefits to state DOTs and the public, including setting realistic public expectations for what the state DOT can expect to accomplish. For example, officials with one state DOT that we interviewed told us that it recently completed an update of the state's plan issued in 2002. The update was prompted by a new governor and a review of the existing plan, which found that the plan included approximately \$20 to \$30 billion worth of projects that had not been funded or implemented because of insufficient revenues. In updating the plan, the state DOT focused its public outreach and consultations with local officials on setting more realistic expectations for future investments. The recently issued, updated plan includes a funding scenario based on current, flat revenue expectations, and identifies four key corridors in the state where improvements could be made, subject to additional revenues. Similarly, FHWA officials that we interviewed told us that, although a state's long-range plan is vital for setting and communicating the state's future transportation goals and strategies, the process of updating the long-range plan is equally important to the state DOT as the final document itself. Officials noted that states that take a committed approach to planning—such as by continually monitoring system performance, conducting ongoing research, and reaching out to the public and stakeholders—increase the likelihood of developing a plan that stakeholders will accept.

While regularly updating the long-range statewide transportation plan has inherent benefits, infrequently updating it presents several risks:

- *Infrequent updates limit USDOT's ability to determine whether states are using federal planning funds effectively to address long-range planning needs.* State DOTs receive substantial amounts of funding from FHWA and FTA for statewide planning, including funds for developing long-range statewide transportation plans. For example, in fiscal year 2009, FHWA provided \$682 million in SPR funds to state DOTs to support their planning activities, including developing long-range statewide transportation plans and STIPS and annually collecting and reporting pavement condition and other data to FHWA's HPMS program. States

---

must document and annually report on activities that they propose to be accomplished with SPR funds, and FHWA must approve these activities.<sup>47</sup> In our survey, four states reported not completing an update of their long-range statewide transportation plan between 2000 and 2009. In that 10-year period, those states received approximately \$640 million in state planning funds, an average of \$16 million per state over that period.<sup>48</sup> Because those states did not update their long-range statewide transportation plan over that period, it is unclear how they applied SPR funding to address their long-range planning needs. It is also unclear whether the investment decisions made over that period were based on the states' current transportation goals and strategies.

- *Some plans may not reflect the current federal surface transportation authorization.* Federal surface transportation authorization legislation creates new planning requirements and funding opportunities that states should address in their long-range statewide transportation plans. For example, through SAFETEA-LU, which was enacted in August 2005, Congress revised several federal planning provisions and established several new funding programs for state DOTs to consider in their planning process.<sup>49</sup> Among these were three federal transportation programs designed to target funds to infrastructure projects that have high costs, involve national or regional impacts, and cannot easily or specifically be addressed within existing federal surface transportation programs.<sup>50</sup> In responding to our survey, 10 state DOTs reported that they have not updated their long-range statewide transportation plans since 2004, prior to SAFETEA-LU's passage.<sup>51</sup> Consequently, those states' long-range statewide transportation plans likely do not reflect amended statewide

---

<sup>47</sup>23 C.F.R. § 420.111 and § 420.115.

<sup>48</sup>Individual averages ranged from \$2.9 million to \$50.1 million per year.

<sup>49</sup>For instance, SAFETEA-LU added a requirement that the long-range statewide transportation plan include a discussion of potential environmental mitigation activities, to be developed in consultation with federal, state, and tribal wildlife, land management, and regulatory agencies.

<sup>50</sup>Those programs were Projects of National and Regional Significance, the National Corridor Infrastructure Improvement Program, and Coordinated Border Infrastructure.

<sup>51</sup>Pub. L. No. 109-59, Title III, § 3006(b) and Title VI, §6001(b) provide that "The Secretary shall not require a State or metropolitan planning organization to deviate from its established planning update cycle to implement changes made by this section. Beginning July 1, 2007, State or metropolitan planning organization plan or program updates shall reflect changes made by this section."

---

planning requirements or consider some of the new transportation programs and funding opportunities established by SAFETEA-LU.

- *Some states' STIPs may not be consistent with state priorities in outdated plans.* According to federal planning requirements, each project included in the STIP must be consistent with the long-range statewide transportation plan. States with a long-range plan that is not periodically updated may lack a plan that has been through the public participation and consultation processes and addresses the state's current transportation conditions or provides new strategies to address changing conditions.

---

## USDOT's Oversight of STIPs Focuses on Process

USDOT's review and approval of state DOT STIPs is the primary means through which FHWA and FTA oversee the statewide planning process. As part of the STIP review process, state DOTs must submit to FHWA and FTA for joint review, at least every 4 years, an updated STIP, and in doing so, the state DOT must certify that its planning process was carried out in accordance with federal statutes and planning regulations, including the requirement for demonstrating fiscal constraint (see fig. 1). Although there is no single, established process for conducting these joint reviews, FHWA division office personnel generally lead the STIP review process with assistance from the FTA regional office, on behalf of both agencies. They do so, in part, because FHWA division offices focus on the activities of a single state DOT, whereas FTA regional offices have multiple states in their portfolio. The majority of state DOTs submit a new STIP for FHWA's and FTA's approval either on an annual or biannual basis, and many state DOTs amend their STIP over the course of a year, requiring FHWA and FTA to review the amended document to ensure that it remains fiscally constrained. When that review is complete, FHWA and FTA send the state DOT a letter indicating that they have approved the STIP in its entirety, approved the STIP subject to certain corrective actions, or partially approved the STIP for a portion of the state.

Pursuant to federal law, USDOT's oversight of the STIP is focused on a state DOT's compliance with planning process requirements. In addition, USDOT's STIP oversight does not consider transportation planning outcomes. Specifically, through the STIP review and approval process, FHWA and FTA make a joint finding on the extent to which the STIP is based on a statewide planning process that meets or substantially meets federal planning requirements—for example, by ascertaining whether the state DOT has demonstrated fiscal constraint over the 4 years covered by the STIP. However, federal statutes or planning regulations do not require

---

states to establish or attain specific performance thresholds or outcomes in the statewide planning process, such as improving highway safety, reducing congestion, or maintaining the state of repair of a state's transportation assets. We have previously recommended to USDOT,<sup>52</sup> as well as to Congress, that adopting performance measures and goals for programs can aid in measuring and evaluating the success of the programs, thereby potentially leading to better decisions about transportation investments.<sup>53</sup> As discussed in the next section of this report, some states do not have the performance measures and targets they would need to determine whether they have attained such thresholds or outcomes. According to USDOT officials and other stakeholders that we interviewed, FHWA and FTA's joint review of a state DOT's STIP does not evaluate the effectiveness of the state's planning process in achieving such transportation outcomes—instead, it focuses solely on whether the state has a process in place to meet federal planning requirements and whether the state-certified STIP meets those requirements.

We have previously reported that, in addition to ensuring compliance with regulations, oversight provides a means by which the federal government can ensure that federal funds are being used to achieve planned outcomes. If FHWA and FTA jointly determine and document that the submitted or amended STIP does not meet federal planning requirements, FHWA and FTA can withhold future apportioned surface transportation program funds until substantial compliance is demonstrated.<sup>54</sup> However, USDOT's internal planning guidance indicates that, in general, FHWA and FTA do not disapprove STIPs. Instead, the planning guidance indicates that the STIP is reviewed to determine if any portion of the document meets the federal requirements and can be partially approved. In our review, we examined FHWA and FTA planning findings for the most recent STIP submitted by each of the 52 state DOTs, not including amendments. We found that FHWA and FTA approved all 52 STIPs, including 35 in their

---

<sup>52</sup>GAO, *Rail Transit: Additional Federal Leadership Would Enhance FTA's State Safety Oversight Program*, [GAO-06-821](#) (Washington, D.C.: July 26, 2006) and [GAO-08-400](#).

<sup>53</sup>USDOT officials generally agreed with our recommendations and stated that, although they do have some performance measures in place for certain programs, additional performance measures could be beneficial.

<sup>54</sup>23 U.S.C. § 133(d)(4),(e)(1).

---

entirety, 13 subject to corrective actions, and 4 partially.<sup>55</sup> USDOT officials reported that in many cases, FHWA and FTA collaborate closely with the state DOT throughout the planning process and are able to address any issues that could result in a corrective action following the STIP review. As a result, FHWA and FTA officials are often familiar with the content of a STIP before they review it and the review can occur without findings.

---

## Most States Reported Making Some Use of Performance Measurement for Planning, but a Performance-Based Framework Offers Opportunities to Improve Statewide Planning

### Most States Reported Using Some Performance Measures and Targets, but Several Challenges Limit Greater Use of Performance Measurement in Planning

In our survey and interviews, state DOTs reported using performance measurement—specifically performance measures and targets—in the statewide transportation planning process. Overall, the majority of state DOTs reported making use of performance data in developing their long-range statewide transportation plan (32) and their STIP (36). The most commonly used performance measures and quantifiable performance targets were reported in the areas of safety and asset condition, with lower levels of usage of project delivery and mobility measures (see table 1). Not surprisingly, state DOTs also reported that safety and asset condition measures were considered to be most useful to the statewide planning process. Although many states reported using some performance measures, stakeholders and USDOT officials told us that only a select few states have made significant attempts to integrate performance

---

<sup>55</sup>Conditional approval indicates that FHWA and FTA have determined that corrective actions need to be taken before the STIP can be found to meet or substantially meet federal planning requirements. Partial approval indicates that FHWA and FTA have approved the STIP for only a specific geographic area of a state.

measurement into their statewide planning process to inform investment decisions.

**Table 1: Number of State DOTs Reporting Using Performance Measurement to Inform Decisions in the Statewide Planning Process in the Last 12 Months**

	Used performance measures in the last 12 months	Had quantifiable targets for performance data	Considered to be of very great or great use to planning process
<b>Safety and asset condition measures</b>			
Safety measures	50	49	40
Road surface or pavement conditions	49	47	42
Bridge conditions	49	48	44
<b>Project measures</b>			
Project costs	43	34	29
Timeliness of project delivery	42	38	21
Progress made implementing the STIP	39	38	21
Progress made implementing long-range statewide transportation plan	33	22	12
<b>Mobility measures</b>			
Vehicle congestion levels	42	35	25
Truck freight mobility	32	13	12
Intermodal connectivity of state transportation network	25	12	9
Transit congestion levels	22	10	4
<b>Other measure</b>			
Surface transportation-related emissions or energy consumption	24	20	9

Source: State DOT survey.

- Safety measures.* Almost all state DOTs (50) reported using safety measures in the past 12 months, and 49 state DOTs reported having quantifiable performance targets for these measures. Fewer state DOTs (40) considered safety measures of great or very great use in the planning process. The extensive use of safety measures is due, in part, to the federal requirement that state DOTs develop a strategic highway safety plan that establishes statewide goals and objectives to reduce highway fatalities and

---

serious injuries on all public roads.<sup>56</sup> Of those state DOTs reporting that safety measures were of great or very great use, several cited crash data as being particularly useful for identifying high-crash locations or intersections and prioritizing improvements in those areas. Others reported that safety measures were used to evaluate the effectiveness of specific safety programs, such as seat belt use or motorcycle safety, or to develop the strategic highway safety plan.

- *Asset condition measures.* The vast majority of state DOTs (49) also reported using measures for the conditions of their roads, pavement, and bridges, and most of these state DOTs also reported having performance targets for these measures. The widespread availability and usage of these measures is likely related to the requirement that state DOTs collect and report data to FHWA on the condition of their roads and bridges.<sup>57</sup> Forty-four state DOTs considered bridge condition measures to be of great or very great use and 42 state DOTs considered road condition measures to be of great or very great use in their planning process. DOTs reported referring to these measures to make funding allocation decisions, identify assets most in need of improvement, and prioritize competing projects.
- *Project measures.* Forty-three state DOTs reported using project cost performance measures, 42 state DOTs used project timeliness performance measures, and 39 state DOTs used performance measures on progress made in implementing the STIP. Fewer state DOTs reported having performance targets for these measures, and fewer still reported that these measures were of great or very great use in statewide planning. While states are not required to use project measures, state DOTs find that monitoring project costs and timeliness can help mitigate cost overruns and project delays. For example, officials with one state DOT said that tracking how well project costs compare to project estimates enables

---

<sup>56</sup>SAFETEA-LU required all states to develop a statewide-coordinated, strategic highway safety plan that provides a comprehensive framework for reducing highway fatalities and serious injuries on all public roads. The plan is to strategically establish statewide goals, objectives, and key emphasis areas developed in consultation with federal, state, local, and private sector safety stakeholders. States are also required to establish an evaluation process to analyze and assess results achieved by highway safety improvement projects. See 23 U.S.C. § 148.

<sup>57</sup>As noted previously, states are required to collect certain data on the condition of public roads, including pavement condition data, and report periodically to FHWA's HPMS program. Similarly, states must inspect and report on the condition of their bridges, generally every 2 years, through FHWA's National Bridge Inspection Program.

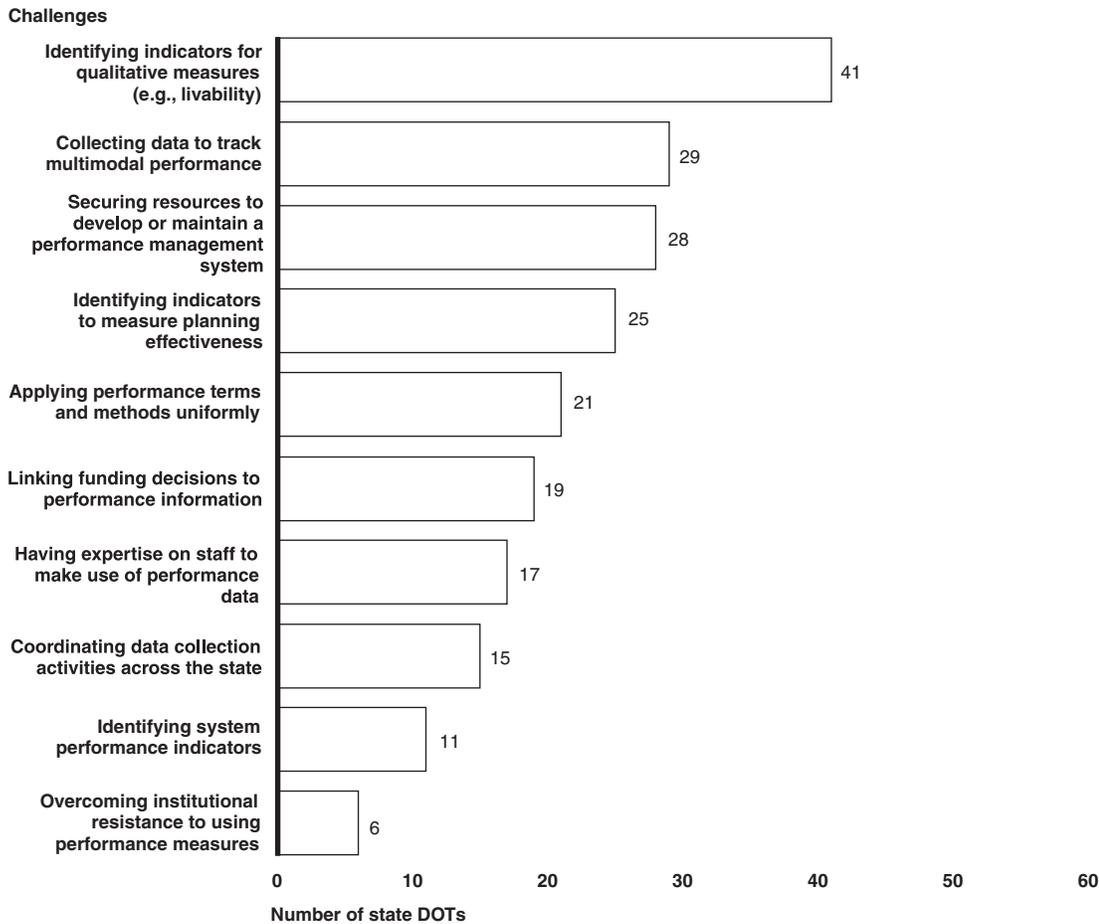
---

them to schedule a high percentage of available funding based on the state DOT's history of delivering projects on time and on budget.

- *Mobility measures.* Overall, fewer state DOTs reported using performance measures or having performance targets for mobility measures, including vehicle congestion, truck freight, intermodal connectivity, and transit congestion (see table 1). Vehicle congestion measures were the most widely used mobility measures, with 42 state DOTs reporting using these measures and 35 state DOTs reporting having quantitative performance targets for these measures. State DOTs reporting that mobility measures were of great or very great use identified several uses for the measures, including factoring congestion data into their funding allocation models and using vehicle congestion data as a preliminary screen for determining whether to widen a road in the future.

Despite efforts to use performance measures in planning, state DOTs identified several significant challenges that limit their ability to make broader use of performance measures. The challenges that state DOTs cited most frequently in our survey as being a great or very great challenge were identifying indicators for qualitative measures such as livability, collecting data to track multimodal performance, and securing sufficient resources to develop and maintain a performance management system. Only six state DOTs reported that institutional resistance to using performance measures was a great or very great challenge to using performance measures for transportation planning (see fig. 10).

**Figure 10: Great or Very Great Challenges to Using Performance Measures for Transportation Planning Reported by State DOTs**



Source: State DOT survey.

- Identifying indicators for qualitative measures.* Forty-one state DOTs reported that identifying indicators for qualitative measures such as livability was a great or very great challenge. USDOT officials, stakeholders, and state DOTs that we interviewed reported that there is little consensus among states on how qualitative variables—such as livability, mobility, or congestion—should be defined or what indicators

---

should be used to measure such concepts.<sup>58</sup> Congestion, for example, has several widely recognized indicators—including number of cars, delay times, and person throughput—yet no single standard exists for reliably collecting or using these data to compare performance across locales. Several stakeholders and USDOT officials noted that even for commonly collected quantitative measures, such as road and pavement surface conditions, there is a lack of consensus among state DOTs on whether pavement roughness measures or other indicators, such as remaining surface life, are most useful.

- *Collecting data to track system performance across multiple modes.* Twenty-nine state DOTs reported that collecting data to track multimodal performance—such as delay times for highway and transit travel—was a great or very great challenge. Stakeholders reported that some states do not have tools and performance measures that would allow them to consider and compare investments in strategies for managing traffic and transit operations alongside investments in more conventional highway infrastructure improvements. Moreover, although state DOTs generally collect performance data to manage state-owned transportation assets, the percentage of roads that are owned and maintained by the state DOT varies across states. Furthermore, stakeholders and state DOT officials reported that states often have insufficient data on truck or freight volumes across their transportation networks that could support long-range systemwide planning.
- *Securing sufficient resources to develop and maintain a performance management system.* In our survey, 28 state DOTs reported that securing sufficient resources for a performance management system was a great or very great challenge. As noted previously, FHWA annually apportions substantial amounts of SPR funds to states for statewide planning and research activities, including collecting data on the performance and condition of public roads for FHWA's HPMS program. In fiscal year 2009, for example, states received a total amount of more than \$680 million to fund planning and research activities. Nonetheless, in our interviews, planning officials noted that collecting and maintaining such data is time-consuming and expensive. For example, states must continually collect road and bridge condition data, which may be housed in separate databases and in different data formats. Planning officials also told us that developing the internal processes to properly collect and use data to make

---

<sup>58</sup>USDOT recently published guidance on applying livability measures. See USDOT, *Livability in Transportation Guidebook: Planning Approaches That Promote Livability*, FHWA-HEP-10-028 (Washington, D.C., September 2010).

---

decisions can take many years. For example, officials at the Washington state DOT said that although they began measuring transportation asset performance in the 1990s, it took them a number of years to identify the most meaningful indicators and refine the data collection and analysis procedures to enable performance-based investment decision making. The officials reported that over time, performance management processes were implemented agency wide to address all of Washington state DOT's program and modal responsibilities.

---

## A Performance-Based Framework Offers Opportunities to Improve Statewide Planning

Through interviews with transportation planning stakeholders and through our expert panel, we identified several elements of a performance-based framework that offer opportunities to facilitate states' use of performance measurement and improve the statewide planning process. Those elements include (1) national transportation goals, (2) collaboratively developed performance measures, (3) appropriate performance targets, and (4) revised federal oversight of statewide planning. Elements of this framework are also consistent with performance measurement requirements that apply to federal agencies, according to prior GAO work,<sup>59</sup> and a recent FHWA report on the experience of other countries in applying performance management to transportation programs.<sup>60</sup>

**National transportation goals.** Transportation planning stakeholders we interviewed and participants in our expert panel commonly cited clear national transportation goals as a critical ingredient in performance-based planning. According to several stakeholders, national goals are necessary to provide clear policy direction for federal transportation investments. In previous work, we have noted that for many surface transportation programs, goals are numerous and conflicting, and we recommended that Congress consider refocusing surface transportation programs so that they have well-defined goals with direct links to an identified federal interest and role.<sup>61</sup> FHWA's international scan report also recommends, as a first

---

<sup>59</sup>See, for example, GAO, *Executive Guide: Effectively Implementing the Government Performance and Results Act*, [GAO/GGD-96-118](#) (Washington, D.C.: June 1996) and [GAO-08-400](#).

<sup>60</sup>USDOT, International Technology Scanning Program, *Linking Transportation Performance and Accountability*, FHWA-PL-10-011, (Washington, D.C., April 2010). This international scan study was sponsored by FHWA, the American Association of State Highway and Transportation Officials, and the National Cooperative Highway Research Program. The report focused on the experiences of Australia, Great Britain, New Zealand, and Sweden.

<sup>61</sup>[GAO-08-400](#).

---

step in developing a performance measurement program, that a limited number of high-level national transportation policy goals be articulated and linked to a clear set of measures and targets, set at the state and local levels. National goals could provide states with an articulated federal interest and help states establish specific transportation outcomes in the statewide planning process, such as improving highway safety or maintaining the state of repair of a state's transportation assets. FHWA planning officials we interviewed said that national goals and associated performance measures would need to be incorporated into statewide and MPO long-range transportation plans to align state and local long-range priorities with national objectives. Such alignment would then be reflected in the STIPs and TIPs, which must be consistent with the long-range statewide transportation plans, making it easier for FHWA and FTA reviewers to ensure that federal surface transportation funds were being allocated to address national transportation goals.

**Collaboratively developed performance measures.** Stakeholders and panelists also commonly said that specific performance measures, linked to national goals, should be developed in close collaboration with the state and local stakeholders responsible for implementing performance-based planning. We previously reported that seeking the involvement of stakeholders and limiting the number of performance measures to a vital few are important practices in developing and implementing successful performance management systems within federal agencies.<sup>62</sup> Stakeholders told us that states and MPOs should be closely involved in developing appropriate performance measures because of the wide range of transportation contexts across states. Without a collaborative process to identify a vital set of performance measures that states and local planners can use, the federal government and states will lack assurance that the resources and effort directed to monitor performance will provide useful information to the federal government on the overall condition of the nation's transportation system.

While our previous work indicates that obtaining agreement among competing stakeholders in developing performance management systems is not easy, officials in one state DOT that we interviewed cited USDOT's efforts to collaborate with states on the development of appropriate performance measures. Specifically, USDOT's National Highway Traffic Safety Administration (NHTSA) partnered with the Governors Highway

---

<sup>62</sup>[GAO/GGD-96-118](#).

---

Safety Association (GHSA)—which represents states’ highway safety offices—to jointly develop traffic safety performance measures for states to use in their strategic highway safety plans. NHTSA and GHSA brought state and local stakeholders together to develop and agree on a minimum set of 14 performance measures for states to use in developing and implementing behavioral highway safety plans and programs.<sup>63</sup> Participants in our expert panel suggested that FHWA and FTA could bring a national perspective and technical expertise to help states develop appropriate measures, particularly for emerging measures such as livability—a challenge that, as noted, state DOTs identified as limiting greater use of performance measurement in planning.

**Appropriate performance targets.** Stakeholders we interviewed and our expert panelists expressed various opinions on the value and implementation of performance targets in statewide planning. The Office of Management and Budget’s guidance to federal agencies on implementing GPRA requires federal agencies to set performance goals that include performance targets and time frames, as part of the annual performance plans that federal agencies develop to show progress in achieving goals.<sup>64</sup> Our prior work has shown that performance targets help promote accountability and allow organizations to track their progress toward goals and give managers important information on which to base their organizational and management decisions. However, several panelists said that if performance targets were set at the federal level and if federal funding allocations were contingent on achieving those targets, states could be penalized for not achieving outcomes that could be beyond their direct control. Other panelists indicated that targets could be useful if linked to performance incentives rather than penalties, and established at the state or local level in consultation with the federal government. According to FHWA’s international scan report, among the countries examined it was common for different levels of government to set performance targets jointly and collaborate on ways to achieve targets, rather than for one level of government to set a target and then penalize another for missing it.

**Revised federal oversight of statewide planning.** As previously noted in this report, FHWA and FTA’s joint oversight of statewide planning

---

<sup>63</sup>For example, see USDOT, *Traffic Safety Performance Measures for States and Federal Agencies*, DOT HS 811 025 (Washington, D.C., August 2008).

<sup>64</sup>Office of Management and Budget, Circular No. A-11.

---

focuses on state DOTs' compliance with planning process requirements and does not consider transportation planning outcomes. Several stakeholders and panelists told us that this process-oriented oversight is of limited value to state DOTs in improving the effectiveness of statewide planning. USDOT officials reported that a performance-based planning framework would require legislative changes to transition USDOT's statewide planning oversight role to focus on transportation outcomes, such as whether states are making progress in improving highway safety or maintaining the nation's transportation assets in a state of good repair. USDOT's recent international scan report found that linking national goals to state or regional performance measures appeared to create a strong focus on outcomes instead of process among the nations reviewed. Additionally, panelists reported that regular reporting by state DOTs to USDOT on progress made in achieving outcomes could improve communication between the states and the federal government, and enable USDOT to provide technical assistance as states' need for it becomes apparent.

Although implementing a performance-based framework will not be easy, our state DOT survey results suggest that many state DOTs could be receptive to increasing their use of performance measurement. In prior work, we have noted that the ultimate benefit of collecting performance information—improved decision making and results—is only fully realized when this information is used to support management planning and decision-making functions.<sup>65</sup> Our work evaluating the extent to which federal agencies' use performance information to make decisions demonstrates that such organizational change does not occur quickly.<sup>66</sup> However, as previously noted, only six state DOTs in our survey reported that institutional resistance to using performance measures was a great or very great challenge to using performance measures for transportation planning. Given the progress some state DOTs have already made in using performance-measurement, other state DOTs may be well-positioned to move toward a performance-based planning framework.

---

<sup>65</sup>GAO, *Results-Oriented Management: Strengthening Key Practices at FEMA and Interior Could Promote Greater Use of Performance Information*, [GAO-09-676](#) (Washington, D.C.: Aug. 17, 2009).

<sup>66</sup>GAO, *Managing for Results: Enhancing Agency Use of Performance Information for Management Decision Making*, [GAO-05-927](#) (Washington, D.C.: Sept. 9, 2005).

---

## Conclusions

Statewide transportation planning is an important process for deciding how to spend substantial amounts of federal surface transportation funds—almost \$46 billion in fiscal year 2009. However, the current, statewide transportation planning framework does not provide the federal government with sufficient information to ensure that states' planning activities are contributing to improved transportation outcomes—such as improving the state of repair of transportation assets—and that states are fully considering the long-range needs of the nation's transportation infrastructure. For example, because federal oversight of statewide planning focuses on process, rather than specific transportation outcomes, it is unclear whether states' investment decisions are improving the condition and performance of the nation's transportation system.

A performance-based planning framework offers opportunities to focus statewide planning on achieving transportation outcomes. Encouragingly, our state DOT survey results suggests that states have already taken some important steps in this direction by setting broad goals in their long-range statewide transportation plans and using performance measures and targets to monitor the safety and condition of many roads and bridges. However, some long-range statewide transportation plans are infrequently updated, and individual state efforts toward performance-based planning are not part of a coordinated federal approach. As a result, the federal government has limited ability to measure the results of its investment in statewide planning. Nonetheless, our results suggest that many states could be ready to transition to a performance-based planning framework, with the appropriate assistance and collaboration of the federal government. USDOT, through NHTSA, has experience working with states to make states' strategic highway safety plans more performance based. This experience could be useful to FHWA, FTA, and states as they endeavor to address both national and state transportation concerns in a performance-based planning framework. As Congress moves forward with reauthorizing federal surface transportation programs, it has an opportunity to take the legislative action needed to shift to a performance-based approach for statewide planning and oversight, through which the federal government, states, and local planners can collaboratively address their transportation concerns.

---

## Matters for Congressional Consideration

Congress should consider transitioning statewide transportation planning and oversight toward a more performance-based approach. Actions to accomplish this transition could include

- 
- identifying specific transportation outcomes for states to address in statewide transportation planning and charging USDOT with assessing states' progress in achieving these outcomes through its STIP review and approval process,
  - requiring states to update their long-range statewide transportation plans on a prescribed schedule to ensure the effective use of federal planning funds and to address statewide planning outcomes, and
  - requiring USDOT and states to collaboratively develop appropriate performance measures to track progress in achieving planned transportation outcomes.

---

## Agency Comments

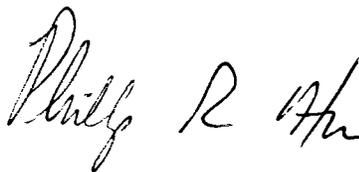
We provided a draft of this report to USDOT for review and comment on November 5, 2010. USDOT officials provided technical comments which we incorporated into the report, as appropriate.

---

We are sending copies of this report to interested congressional committees and the Secretary of Transportation. In addition, this report will be available at no charge on GAO's Web site at <http://www.gao.gov>.

If you or your staff have any questions about this report, please contact me at (202) 512-2834 or [herrp@gao.gov](mailto:herrp@gao.gov). Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix III.

Sincerely yours,



Phillip R. Herr  
Director, Physical Infrastructure Issues

---

# Appendix I: Scope and Methodology

---

To identify the planning activities conducted by state departments of transportation (state DOT) we reviewed federal statutes and regulations governing the statewide planning process<sup>1</sup> and conducted a Web-based survey of 52 state DOTs, including those in Puerto Rico and the District of Columbia. To identify survey participants, we used contacts provided by the American Association of State Highway Transportation Officials' (AASHTO) Standing Committee on Planning, current as of March 4, 2010. In designing the survey questions, we interviewed a range of transportation policy stakeholders, including state DOT planning officials and officials with the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA), and we consulted GAO staff with appropriate subject-matter expertise. In addition, we conducted three pretests of the survey of state DOTs and obtained feedback on the survey from two external planning experts and from FHWA and FTA officials to ensure that the questions were clear and did not place an undue burden on officials, that the terminology was used correctly, and that the questionnaire was comprehensive and unbiased. We made changes to the content and format of the questionnaire based on their feedback. We conducted the survey from April 20, 2010, to June 18, 2010, and received responses from all 52 state DOTs, for a 100 percent response rate. The complete results of the state DOT survey can be found at [GAO-11-78SP](#).

Because we administered the state DOT survey to the complete universe of potential respondents, there are no sampling errors. However, the practical difficulties of conducting any survey may introduce errors, commonly referred to as nonsampling errors. For example, difficulties in how a particular question is interpreted, in the sources of information that are available to respondents, or in how the data are entered into a database or were analyzed can introduce unwanted variability into the survey results. We encountered a nonsampling survey error in analyzing the state DOT survey responses. Specifically, in some instances, respondents provided conflicting, contradictory, or unnecessary information in portions of the survey. We addressed these errors by contacting the state DOT officials involved and clarifying their responses.

To obtain more in-depth information on state DOT statewide planning activities, we reviewed planning documents from and interviewed officials

---

<sup>1</sup>Federal provisions for statewide transportation planning are in 23 U.S.C. § 135 and 49 U.S.C. § 5304. Federal Highway Administration and Federal Transit Administration regulations implementing these provisions are in 23 C.F.R. part 450, subpart B.

in six states: Louisiana, Montana, Pennsylvania, Texas, Washington state, and West Virginia. In each state we interviewed officials from state DOTs, FHWA division offices, FTA regional offices, rural planning organizations (RPO),<sup>2</sup> metropolitan planning organizations (MPO), and, when present, tribal planning organizations. To ensure that we identified a range of states for our case studies, we considered

- recommendations from transportation planning stakeholders;
- the percentage of road miles owned by the state;
- the presence of MPOs in the state and the percentage of the population covered by MPOs;
- the presence of federally recognized tribes; and
- the representation of FTA regions.

These criteria allowed us, in our view, to obtain information from a diverse mix of state DOTs and other state planning organizations, but the findings from our case studies cannot be generalized to all states because the states selected were part of a nonprobability sample. We used information obtained during the case studies throughout this report.

To gather information on the extent to which RPOs are satisfied that rural needs are considered in statewide planning, we conducted a second Web-based survey of regional planning and development organizations from all 50 states. We sent surveys to the 564 organizations in a database collected by the National Association of Development Organizations that included a range of different types of organizations that conduct regional planning activities, including RPOs, councils of government (COG), regional planning commissions, economic development agencies, county and city planning offices, and others similar organizations. Because the database did not contain organizations in Delaware, Hawaii, and Rhode Island, we identified a total of five organizations from those states that conduct regional planning activities and sent surveys to those organizations. Because the National Association of Development Organizations database includes organizations that conduct a variety of regional planning

---

<sup>2</sup>States that employ such organizations refer to them by different names, including rural planning organizations, regional transportation planning organizations, and others. In this report, we use the general term RPO to refer to all such organizations.

activities, including transportation planning, we asked each surveyed organization to identify the specific planning activities that it performs. In this report, we provided information only from those organizations that reported that they coordinate or conduct surface transportation or transit planning in the nonmetropolitan areas of their region. For the purposes of this report, organizations that indicated that they perform this activity are considered RPOs. To ensure the reliability of the database, we spoke with National Association of Development Organizations officials about the characteristics of the database and determined that it was sufficiently reliable for our needs. In developing the survey questions, we interviewed transportation planning stakeholders and pretested the survey with a total of five RPOs in four states to determine that the questions were clear and did not place an undue burden on officials, that the terminology was used correctly, and that the questionnaire was comprehensive and unbiased. We made changes to the content and format of the questionnaire based on their feedback. We conducted the survey from May 17, 2010, to June 25, 2010, and received completed surveys from 72 percent of the organizations surveyed. The complete results of this survey can be found at [GAO-11-78SP](#).

To gather information on the challenges that state DOTs face in the statewide transportation planning process, we relied primarily on data collected in the state DOT survey, in which we asked state DOT respondents to identify through open-ended responses the three most significant challenges encountered in developing both the long-range statewide transportation plan and the state transportation improvement program (STIP). We then performed a content analysis on the open-ended question responses through the following process. We identified a total of 13 categories of challenges identified by state DOTs in their responses, including funding, stakeholder involvement, and staffing, among others. We developed a codebook that defined each category, and two GAO analysts independently assigned codes to each response. Afterwards, the analysts met to resolve any differences in their coding until they reached consensus. We then removed duplicate responses—instances in which a state DOT reported the same challenge for the same plan more than once—to ensure that only unique challenges reported by state DOTs were reported in our analysis. Finally, we analyzed the coded responses to determine how many state DOTs encountered each challenge in developing both the long-range statewide transportation plan and the STIP.

To obtain information on FHWA's and FTA's approach to overseeing statewide transportation planning, we interviewed FHWA and FTA

officials in headquarters and in the six states where we interviewed state DOT officials (Louisiana, Montana, Pennsylvania, Texas, Washington State, and West Virginia). Specifically, we interviewed officials in the six FHWA division offices in the six states and in the four FTA regional offices with responsibility for those states (FTA regions 3, 6, 8, and 10). We also reviewed FHWA and FTA planning guidance and the planning findings from FHWA and FTA's joint review of each state DOT's most recent STIP, to determine what joint action FHWA and FTA took following their review.

To identify the extent to which state DOTs are using performance measurement for planning and opportunities to make statewide planning more performance based, we analyzed data collected through our state DOT survey and interviews with state DOT officials. We also contracted with the National Academy of Sciences to convene a balanced, diverse panel of 14 experts to discuss performance measurement in statewide transportation planning. We worked closely with the National Academy's Transportation Research Board to identify and select panelists with experience in the implementation of performance measurement in, and knowledge of, the statewide transportation planning processes. The panelists convened in Minneapolis, Minnesota, on July 14, 2010, and their discussion was divided into three moderated subsessions. The subsessions addressed the appropriate roles of the federal government and the states in making statewide planning more performance based, how performance measures could be used to better link statewide planning to programming decisions, and the advantages and disadvantages of linking federal funding to achieving transportation performance goals. The moderator facilitated a discussion among the panelists to gather their perspectives on each topic. In keeping with the National Academy's policy, the panelists were invited to provide their individual views, and the panel was not designed to reach a consensus on any of the issues that we asked the panelists to discuss. Results of the discussions were used to inform key elements of a framework to make statewide transportation planning more performance based. We did not verify the panelists' statements. The views expressed by the panelists do not necessarily represent the views of GAO or the National Academy. Participants in the expert panel are listed in table 2.

**Table 2: Panelists on the GAO and National Academy Expert Panel**

<b>Name</b>	<b>Affiliation</b>
Lance Neumann (Moderator)	President, Cambridge Systematics, Inc.
Mark Aesch	Chief Executive Officer, Genesee Regional Transportation Authority (Rochester, NY)
Daniela Bremmer	Director of Strategic Assessment Washington State Department of Transportation
Leanna Depue	Director, Highway Safety Division Missouri Department of Transportation
Patricia Hendren	Director, Office of Performance Washington Metropolitan Area Transit Authority
Charles Howard	Director, Transportation Planning Puget Sound Regional Council
Tim Lomax	Research Engineer Regents Fellow Texas Transportation Institute, Texas A&M
Steve Pickrell	Senior Vice President, Policy and Planning Cambridge Systematics, Inc.
Amanda Pietz	Interim Planning and Implementation Manager Transportation Development Division, Oregon Department of Transportation
Peggy Reichert	Director, Statewide Planning and Analysis Office of Investment Management Minnesota Department of Transportation
Kyle Schneweis <sup>a</sup>	Chief of Governmental Affairs Kansas Department of Transportation
George Schoener	Executive Director, I-95 Corridor Coalition
Jack Stickel	Transportation Data Services Manager Alaska Department of Transportation and Public Facilities
Mary Lynn Tischer	Director, Office of Transportation Policy Studies, FHWA
David Wasserman	Transportation Engineer, Strategic Planning Office North Carolina Department of Transportation

Source: GAO.

<sup>a</sup>Employed by High Street Consulting on day of panel.

The expert discussion cited in this report should be interpreted in the context of two key limitations and qualifications. First, although we were able to secure the participation of a balanced, highly qualified group of experts, other experts in this field could not be included because we needed to limit the size of the panel. Although many points of view were represented, the panel was not representative of all potential views.

Second, even though GAO, in cooperation with the National Academy, conducted preliminary research and heard from national experts in their fields, a day's conversation cannot represent the current practice in this vast area. More thought, discussion, and research must be done to develop greater agreement on what we really know, what needs to be done, and how to do it. These two key limitations and qualifications provide contextual boundaries. Nevertheless, the panel provided a rich dialogue on making statewide transportation planning more performance based, and the panelists provided insightful comments in responding to the questions they were asked.

To gather additional information related to all of our research objectives, we interviewed a range of transportation planning stakeholders representing state, local, and private-sector groups, including AASHTO, the Association of Metropolitan Planning Organizations, the Bipartisan Policy Center, Cambridge Systematics Inc., the I-95 Corridor Coalition, the National Association of Counties, the National Association of Development Organizations, the National Association of Regional Councils, and National Academy's Transportation Research Board.

We conducted this performance audit from October 2009 through December 2010 in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions based on our audit objectives. We believe that the evidence obtained provides a reasonable basis for our findings and conclusions based on our audit objectives.

---

# Appendix II: Information on the Participation of Rural Planning Organizations in Statewide Transportation Planning

---

RPOs that we surveyed reported information on the following topics discussed in this appendix:<sup>1</sup> (1) RPO service areas, (2) planning funds received by RPOs, (3) planning activities performed by RPOs, (4) needs of nonmetropolitan areas served by RPOs, (5) activities performed by state DOTs to consult with RPOs, and (6) RPOs' satisfaction with their state DOT's consultation activities. The complete results of this survey are available in [GAO-11-78SP](#).

---

## RPO Service Areas

In general, RPOs are voluntary organizations of local elected officials and representatives of local transportation systems that serve nonmetropolitan areas not represented by a metropolitan planning organization (MPO). MPOs represent urbanized areas with more than 50,000 people. However, because RPOs may serve multiple nonmetropolitan municipalities, the population of the combined RPO service areas may be greater than 50,000. In our survey, we found that the size of the population serviced by RPOs varied greatly, with 57 percent reporting a population smaller than 150,000 and 43 percent reporting a population in their service area greater than 150,000. RPOs reported, on average, that they serve 5 counties and 36 municipalities, such as cities, towns, or villages. RPOs reported that the number of full-time staff performing rural transportation planning averaged 2 and ranged from 0 to 18.

---

## Planning Funds Received by RPOs

RPOs may receive state or federal funding to conduct nonmetropolitan planning (see table 3). Of RPOs responding to our survey, 80 percent reported receiving funding in fiscal year 2009 from their state DOT. In addition, 41 percent reported that their state DOT provided them with state planning and research (SPR) funds from FHWA and 14 percent reported that their state DOT provided them with State Planning and Research Program (SPRP) funds from FTA.

---

<sup>1</sup>Through our survey of regional planning and development organizations, we asked survey respondents to indicate whether they coordinate or conduct surface transportation or transit planning in nonmetropolitan areas. For the purposes of this report, we refer to organizations that perform such activities as RPOs. Survey responses from organizations reporting that they did not coordinate or conduct surface transportation or transit planning in nonmetropolitan areas are not included in this appendix. The complete results of this survey are available in [GAO-11-78SP](#). For information on our survey methodology, see appendix I.

**Appendix II: Information on the Participation of Rural Planning Organizations in Statewide Transportation Planning**

**Table 3: Transportation Planning Funds Received by RPOs by Source and Amount**

Source <sup>a</sup>	Percent Reporting Receiving Funds <sup>b</sup>	Average Reported Amount Received	Range of Reported Amounts Received
State DOT funds	80%	\$96,082	\$3,000-662,000
FHWA, SPR funds	41	125,040	6,668-3,500,000
FTA, SPRP funds	14	37,919	4,000-96,745

Source: Regional Planning and Development Organization survey.

<sup>a</sup>FHWA SPR funds are authorized under 23 U.S.C. 505, and FTA SPRP funds are authorized under 49 U.S.C. 5305.

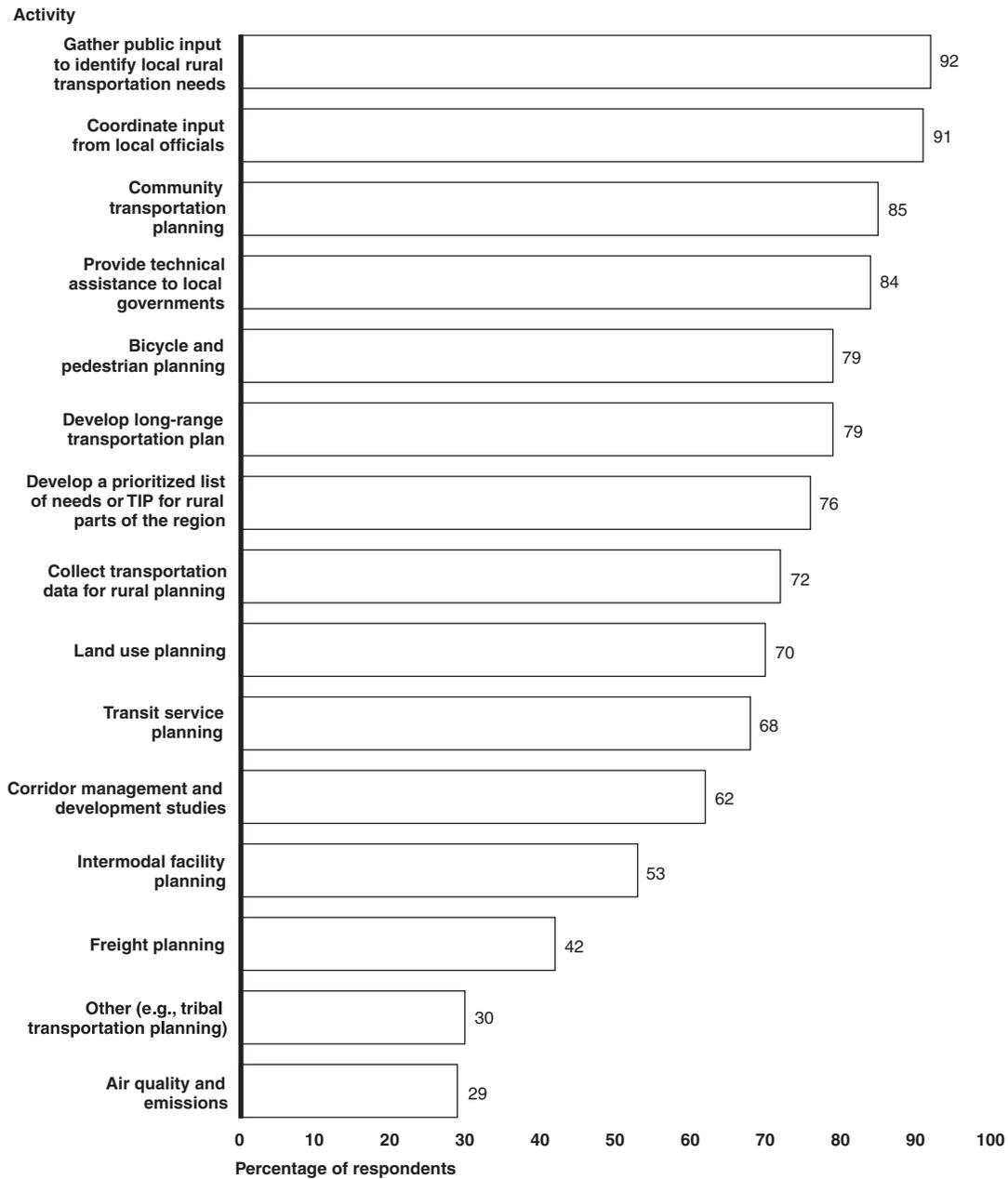
<sup>b</sup>Percent does not add up to 100 as RPOs may receive funding from more than one source.

**Planning Activities Performed by RPOs**

We asked RPOs about the types of planning activities that they conduct. Of the 15 activities RPOs were asked about, 12 were performed by more than 50 percent of RPOs (see fig. 11). More than 80 percent of RPOs reported gathering or coordinating input from public and local officials; conducting community planning activities, such as improving accessibility for seniors and disabled persons; and providing technical assistance to local governments, such as Geographic Information System mapping or transportation modeling. Most RPOs reported conducting other types of planning, such as bike and pedestrian, land-use, and transit service planning, among others. About a third to a half of RPOs reported planning for different modes, freight, or air quality and emissions and conducting other planning activities, such as tribal transportation planning, demographic forecasting, and scenic byway planning.

**Appendix II: Information on the Participation  
of Rural Planning Organizations in Statewide  
Transportation Planning**

**Figure 11: Survey Responses for Transportation Planning Activities Conducted by RPOs**

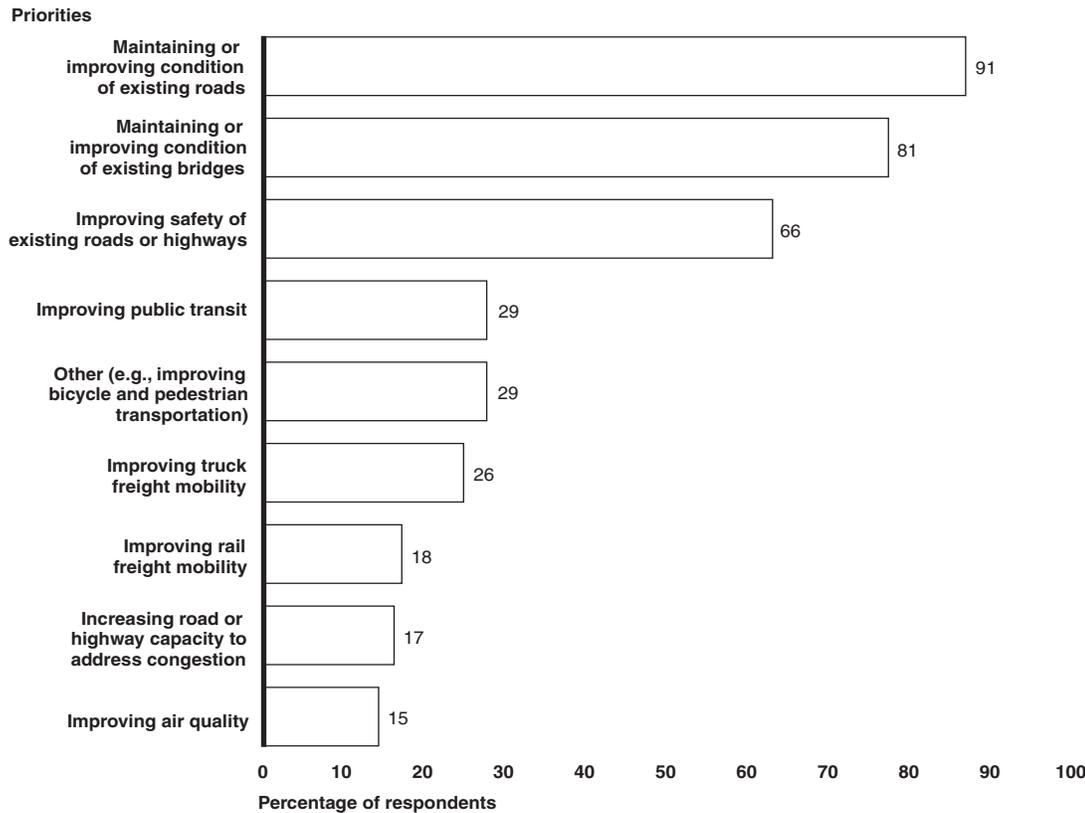


Source: Regional planning and development organization survey.

## Needs of Nonmetropolitan Areas Served by RPOs

According to RPOs, maintaining or improving existing roads and bridges and safety are their highest-priority transportation needs. Specifically, 60 to 90 percent of RPOs reported that maintaining or improving existing roads, maintaining or improving existing bridges, and improving the safety of existing assets were of higher priority (see fig. 12). Twenty-six to 29 percent reported that higher-priority needs for their region include improving public transit, such as by reducing congestion or improving accessibility; other needs, such as bike and pedestrian trails, and economic development; and improving truck freight mobility. Less than 20 percent of RPOs reported that improving rail freight mobility, increasing road or highway capacity to address congestion, or improving air quality, such as by reducing surface transportation emissions, were higher-priority needs.

Figure 12: Survey Responses for RPOs' Opinion of the Higher-Priority Needs for the Nonmetropolitan Areas of Their Region



Source: Regional planning and development organization survey.

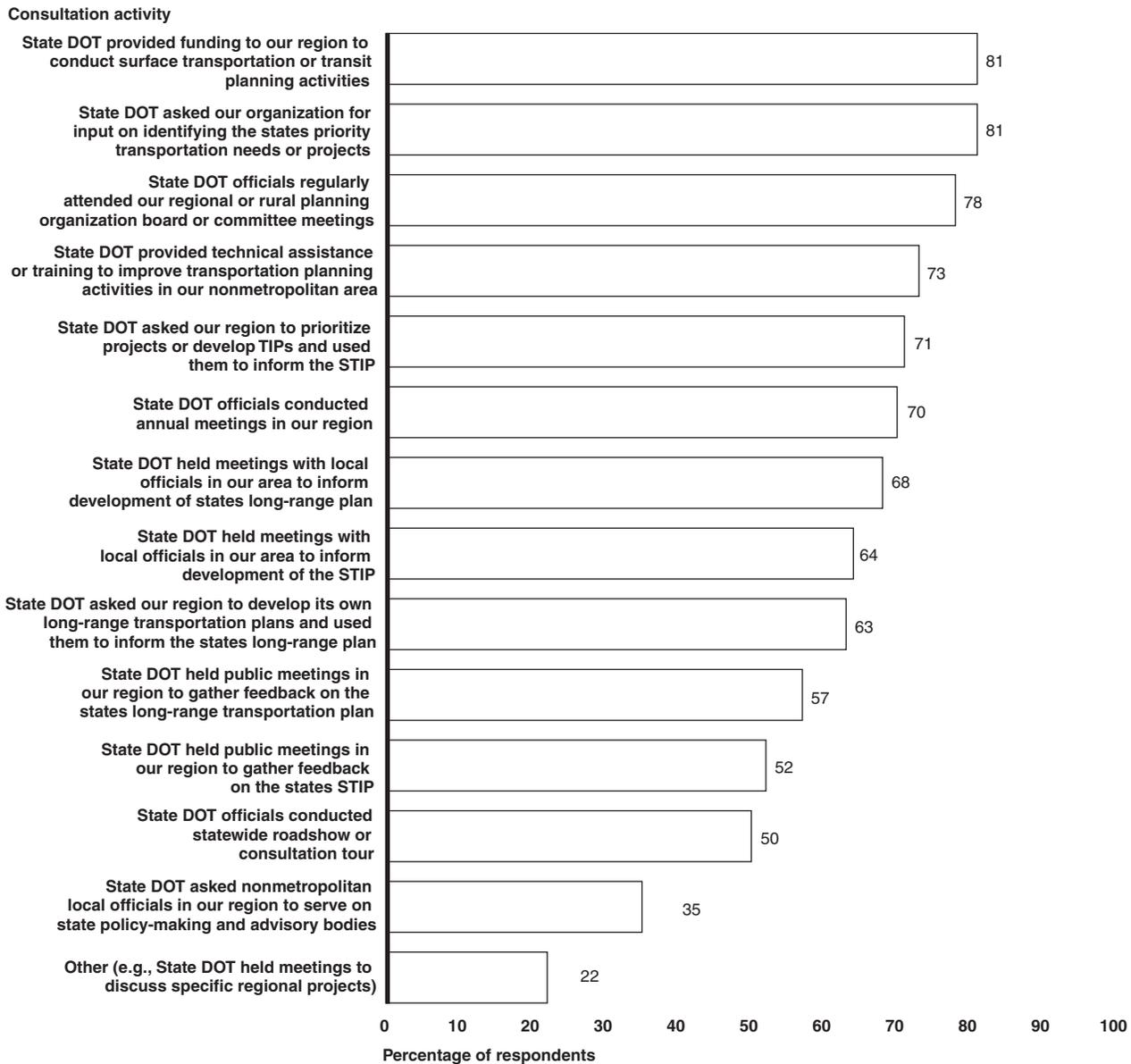
---

**Activities Performed by  
State DOTs to Consult with  
RPOs**

State DOTs are required by federal guidelines to have a documented process in place to consult with nonmetropolitan areas of the state on transportation planning issues. We asked RPOs if, over the past year, their state DOT performed selected activities to consult with them in the statewide planning process. RPOs reported that their state DOT performed a wide range of different activities to consult with them. For example, 81 percent of RPOs reported that their state DOT provided funding to their region to conduct surface transportation planning activities (see fig. 13). Thirty-five percent of RPOs reported that the state DOT asked local officials to serve on policy-making or advisory boards, or to participate in other activities, such as state DOT meetings to discuss specific regional projects.

**Appendix II: Information on the Participation  
of Rural Planning Organizations in Statewide  
Transportation Planning**

**Figure 13: Survey Responses for State DOT Activities Performed to Consult with RPOs in the Statewide Planning Process**



Source: Regional planning and development organization survey.

---

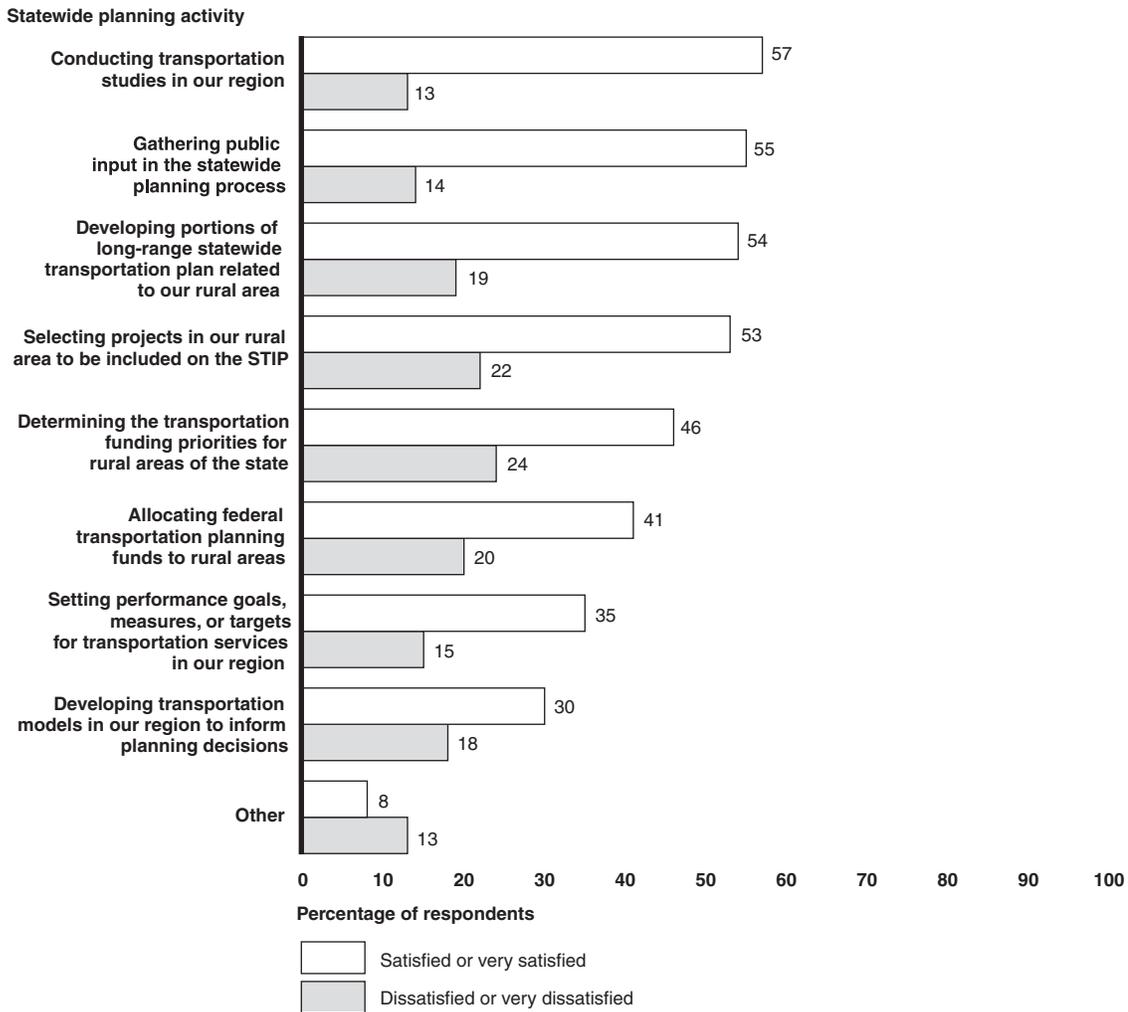
**RPOs' Satisfaction with  
Their State DOT's  
Consultation Activities**

Overall, 63 percent of RPOs reported being satisfied or very satisfied that their state DOT sufficiently considers their region's needs (see page 25 of this report). However, fewer RPOs reported being satisfied or very satisfied with their ability to participate in specific state DOT consultation activities (see fig. 14). More than 50 percent of RPOs reported being satisfied or very satisfied with their ability to participate in state DOT activities that gather public input in the statewide planning process, conduct transportation studies, develop portions of statewide long-range transportation plans, or select rural projects in their area to be included in the STIP. Between 30 to 46 percent of RPOs reported being satisfied or very satisfied with state DOT activities that determine the transportation funding priorities for rural areas; allocate federal planning funds to rural areas; set performance goals, measures, or targets for their area; and develop transportation models to inform decisions.

Overall, 16 percent of RPOs reported being dissatisfied or very dissatisfied with their state DOT sufficiently considers their region's needs. Dissatisfaction with specific state DOT planning activities ranged from 13 to 24 percent (see fig. 14). RPOs most frequently reported dissatisfaction with state DOT activities related to determining the transportation priorities for rural areas of the state. Specific reasons RPOs cited for dissatisfaction vary, but include feeling that their needs are not prioritized, that there is a lack of support for rural planning, and that information gathered through consultation activities is not used to inform the statewide planning process.

**Appendix II: Information on the Participation  
of Rural Planning Organizations in Statewide  
Transportation Planning**

**Figure 14: Surveyed RPOs' Satisfaction with Their Ability to Participate in State DOT Activities**



Source: Regional planning and development organization survey.

---

# Appendix III: GAO Contact and Staff Acknowledgments

---

## GAO Contact

Phillip Herr, (202) 512-2834 or [herrp@gao.gov](mailto:herrp@gao.gov)

---

## Staff Acknowledgments

In addition to the individual named above, Sara Vermillion (Assistant Director), Matt Barranca, Richard Brown, Elizabeth Curda, Brad Dubbs, Elizabeth Eisenstadt, Kathleen Gilhooly, Georgeann Higgins, Hannah Laufe, Jillian McMichael, Jean McSween, Sara Ann Moessbauer, Jay Smale, and Don Watson made key contributions to this report.

---

## GAO's Mission

The Government Accountability Office, the audit, evaluation, and investigative arm of Congress, exists to support Congress in meeting its constitutional responsibilities and to help improve the performance and accountability of the federal government for the American people. GAO examines the use of public funds; evaluates federal programs and policies; and provides analyses, recommendations, and other assistance to help Congress make informed oversight, policy, and funding decisions. GAO's commitment to good government is reflected in its core values of accountability, integrity, and reliability.

---

## Obtaining Copies of GAO Reports and Testimony

The fastest and easiest way to obtain copies of GAO documents at no cost is through GAO's Web site ([www.gao.gov](http://www.gao.gov)). Each weekday afternoon, GAO posts on its Web site newly released reports, testimony, and correspondence. To have GAO e-mail you a list of newly posted products, go to [www.gao.gov](http://www.gao.gov) and select "E-mail Updates."

---

## Order by Phone

The price of each GAO publication reflects GAO's actual cost of production and distribution and depends on the number of pages in the publication and whether the publication is printed in color or black and white. Pricing and ordering information is posted on GAO's Web site, <http://www.gao.gov/ordering.htm>.

Place orders by calling (202) 512-6000, toll free (866) 801-7077, or TDD (202) 512-2537.

Orders may be paid for using American Express, Discover Card, MasterCard, Visa, check, or money order. Call for additional information.

---

## To Report Fraud, Waste, and Abuse in Federal Programs

Contact:

Web site: [www.gao.gov/fraudnet/fraudnet.htm](http://www.gao.gov/fraudnet/fraudnet.htm)

E-mail: [fraudnet@gao.gov](mailto:fraudnet@gao.gov)

Automated answering system: (800) 424-5454 or (202) 512-7470

---

## Congressional Relations

Ralph Dawn, Managing Director, [dawnr@gao.gov](mailto:dawnr@gao.gov), (202) 512-4400  
U.S. Government Accountability Office, 441 G Street NW, Room 7125  
Washington, DC 20548

---

## Public Affairs

Chuck Young, Managing Director, [youngc1@gao.gov](mailto:youngc1@gao.gov), (202) 512-4800  
U.S. Government Accountability Office, 441 G Street NW, Room 7149  
Washington, DC 20548

