NCHRP
REPORT 522

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

A Review of DOT Compliance With GASB 34 Requirements

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

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A Review of DOT Compliance With GASB 34 Requirements

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SUBJECT AREAS
Planning and Administration

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in Cooperation with the Federal Highway Administration

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NATIONAL COOPERATIVE HIGHWAY RESEARCH PROGRAM

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Frank Smith, Principal Consultant at PB Consult, Inc., was the principal investigator while Wayne McDaniel, Principal Consultant at PB Consult, Inc., managed the analysis and reporting aspects of the project. Lucinda Eagle and Nick Amrhein of PB Consult, Inc., also made major contributions. Other contributors to this work were Ed Chait of PricewaterhouseCoopers LLP and Mike Markow of Cambridge Systematics, Inc. Survey administration was managed by Stacy Bricka of NuStats, Inc.

FOREWORD

By Gwen Chisholm-Smith
Staff Officer
Transportation Research Board

NCHRP Report 522: A Review of DOT Compliance with GASB 34 Requirements provides a comprehensive look at approaches taken by AASHTO member departments to comply with the requirements of Governmental Accounting Standards Board (GASB) Statement No. 34. GASB 34 is the accounting standard that requires general infrastructure assets to be reported together with related depreciation or preservation costs in the comprehensive financial statements of state and local governments. This report documents how the requirements set by GASB 34 were met and catalogs the various approaches that were implemented in the first year.

This report will be helpful to professionals who work with state DOTs and local governments in the areas of finance, auditing, asset management, and policy-making.

In June 1999, the Governmental Accounting Standards Board (GASB) unanimously approved Statement No. 34: *Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments.* Among its many new provisions, GASB 34 requires that state and local governments begin to report on the cost of their infrastructure assets, including roads and bridges. Given that many of the infrastructure assets owned by the public sector in this country are built and maintained by transportation agencies, DOTs are among the public agencies most affected by these new requirements. Each jurisdiction is allowed to determine its own asset management methodologies, systems, and standards. However, this flexibility results in divergent approaches by the DOTs. This report (1) summarizes the approaches taken by DOTs to comply with GASB 34 and (2) provides information gathered from AASHTO member departments on policies and methodologies for reporting on infrastructure assets.

PB Consult, Inc.; in conjunction with PricewaterhouseCoopers, LLP; Cambridge Systematics, Inc.; and NuStats, Inc.; conducted the research for NCHRP Project 19-04. To achieve the project's objective of summarizing the approaches taken by AASHTO member departments to comply with the requirements of GASB 34, the research team performed a literature review, conducted a comprehensive survey, performed interviews, and conducted six case studies. The six case studies of DOTs (i.e., Michigan, South Carolina, Tennessee, Texas, Vermont, and Washington) covered the range of approaches used to meet the GASB 34 requirements.

The report focuses on the approaches DOTs have taken to comply with the requirements of GASB 34 and why, how these approaches were implemented, problems encountered, resulting changes in practice, and lessons learned. The appendixes, which include the consolidated survey and answers, have been published as *NCHRP Web Document 63,* available at: www4.trb.org/trb/crp.nsf.

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A REVIEW OF DOT COMPLIANCE WITH GASB 34 REQUIREMENTS

SUMMARY

BACKGROUND

In June 1999, the Government Accounting Standards Board (GASB) adopted and released *Statement 34 Basic Financial Statements—and Management's Discussion and Analysis—for State and Local Governments* (herein after referred to as GASB 34), which GASB's Chair characterized as "the most significant change to occur in the history of government financial reporting." GASB 34 provides a comprehensive framework for financial reporting with the objective of making annual reports easier to understand and more useful to the people who rely on the financial information contained therein. The most significant aspect of GASB 34 was that, for the first time, general infrastructure assets were to be reported together with related depreciation or preservation costs.

Although a traditional approach to financial reporting would entail depreciation of assets, AASHTO and the American Public Works Association (APWA) contended that, for several reasons, an optional method of compliance should be available. The reasons included the following:

1. Transportation and other public works network-based assets are not regarded as depreciable, as are equipment and other items;
2. State DOTs have good information and analytical tools to help identify the appropriate level of investment needed to sustain in-service infrastructure assets, including pavement management systems, bridge management systems, and maintenance management systems; and
3. The minimal management contributions that would be obtained from computing depreciation lives and costs would not justify the effort required.

GASB was sufficiently persuaded by these arguments to offer an optional method of compliance. Its June 1999 action authorized both the depreciation approach and a modified approach that relied on asset management analysis and systems as acceptable methods of valuing infrastructure assets. That action also authorized a combination of the two if, in the judgment of the agency, depreciation was appropriate for some asset classes and the modified approach appropriate for others. With this development, many

in the transportation community stopped viewing the requirement to report infrastructure assets as a threat and began to see it as an opportunity to enhance asset management capability.

GASB emphasized that its intent was to allow agencies flexibility in the details of how the methods are actually applied (e.g., in defining types of assets and networks and sub-networks). Moreover, GASB allowed approximations and reasonable estimates of costs. This latitude is embodied in GASB 34 itself and in the examples provided by GASB's Implementation Guides.

GASB 34 includes the following provisions and requirements regarding the reporting of general infrastructure assets:

- Capital assets should be reported at historical cost. The cost of a general capital asset should include ancillary charges necessary to place the asset into its intended location and condition for use. Infrastructure assets are long-lived capital assets that normally are stationary in nature and normally can be preserved for a significantly greater number of years than most capital assets.
- Depreciation Approach:
  - Capital assets that are being or have been depreciated should be the reported net of the accumulated depreciation in the statement of net assets.
  - Capital assets should be depreciated over their estimated useful lives unless they are either inexhaustible (e.g., land) or are infrastructure assets reported using the modified approach.
  - Depreciation expense should be reported in the statement of activities. Depreciation expense should be measured by allocating the net cost of depreciable assets (historical cost less estimated salvage value) over their estimated useful lives in a systematic and rational manner. It may be calculated for (a) a class of assets, (b) a network of assets, (c) a subsystem of a network, or (d) individual assets.
- Modified Approach—infrastructure assets that are part of a network or subsystem of a network are not required to be depreciated as long as two requirements are met.
  - First, the government manages the eligible infrastructure assets using an asset management system that has the characteristics set below:
    - Provides an up-to-date inventory of eligible infrastructure assets;
    - Performs condition assessments of the eligible infrastructure assets and summarizes the results using a measurable scale; and
    - Estimates each year the annual amount to maintain and preserve the eligible infrastructure assets at the condition level established and disclosed by the government.
  - Second, the government documents that the eligible infrastructure assets are being preserved approximately at (or above) a condition level established and disclosed by the government. Determining what constitutes adequate documentary evidence to meet the second requirement involves professional judgment because of variations among government asset management systems and condition assessment methods. However, governments should document the following:
    - Complete condition assessments of eligible infrastructure assets are performed in a consistent manner at least every 3 years.
    - The results of the three most recent assessments provide reasonable assurance that the eligible infrastructure assets are being preserved approximately at (or above) the condition level established and disclosed by the government.

- The estimated annual amount calculated at the beginning of the fiscal year to maintain and preserve the level at (or above) the condition level established and disclosed by the government is compared with the amounts actually expensed for each of the past five reporting periods.
- If eligible infrastructure assets meet these requirements and are not depreciated, all expenditures made for those assets (except for additions or improvements) should be expensed in the period incurred. Additions or improvements to eligible infrastructure assets should be capitalized.

GASB 34 called for the prospective reporting aspect of the new standards to become effective in fiscal years ending after June 15, 2002, for governments with total annual revenues of $100 million or more. The requirement for retroactive reporting of assets created prior to FY2002 is not effective until FY2005 for major governments, and the extent of retroactivity is limited to 1980. However, most state DOTs have found it more practical to include retroactive reporting in the initial year of implementation and to not make a distinction between pre- and post-1980 assets. Each of the 52 DOTs (DOTs for the 50 states plus the District of Columbia Department of Public Works and the Puerto Rico Department of Transportation and Public Works) is a member of a government in that category. Forty-eight departments have fiscal years ending June 30th; thus these requirements were first effective for the July 1, 2001, through June 30, 2002, fiscal year. Four departments have different fiscal years, and the effective date for these DOTs was deferred accordingly.

NCHRP commissioned the conduct of this survey in order to "catalog and analyze the approaches taken by AASHTO member departments to comply with the requirements of GASB 34" during this first year of implementation. The intent is to share best practice examples, identify alternative approaches to areas where the departments are encountering difficulty, identify subjects that require further consideration by AASHTO committees and other interested parties, and generally improve the state of the practice for reporting in future years.

DOT SURVEY AND INTERIM REPORT

The initial phase of the project was a survey of the state DOTs on their approach to GASB 34 during the first year of implementation. The survey was available as either a web-based instrument or a paper document. Fifty departments responded, and survey findings included the following:

- For this first year of implementation, a higher percentage of state DOTs have adopted the depreciation approach than initially indicated in surveys over the past several years.
- The various reasons for the greater preference for depreciation included the following:
  - It is perceived as simpler to implement,
  - It is preferred by (or more familiar to) state financial officials (and in some cases is the approach designated by state government),
  - It avoids certain problems or requirements of the modified approach, and
  - It is perceived by some that its results may present the state DOT in a more favorable light.
- Most states indicated that the modified approach was more helpful for decision making, although 10 states indicated that neither method was helpful. In view of the extended controversy leading to the adoption of GASB 34, it is remarkable that

only 20% of the states now question the usefulness of the exercise. Most states indicated that the modified approach was more challenging to implement and report. There was considerable diversity of opinion as to which aspects of implementation were the most challenging.

- In addition to the reasons provided for selecting one approach or the other, it appeared that an underlying consideration for some states was the potential effect on funding. For example, several states that selected the modified approach believed that the analysis underpinning this approach might help build the case for maintaining or increasing funding in their deliberations with legislative budget committees and other funding entities. Other states were concerned that this analysis would suggest to the legislature and to the general public that the department had not been discharging its responsibilities efficiently and thus might harm department credibility.
- A similar interplay of considerations was at work in the selection of targeted condition levels by the modified approach states. Some departments were inclined to establish relatively low condition targets that they were sure to achieve, thus generating a positive report for their financial statements. Other departments were concerned that if the condition target was set too far below actual reported conditions, that target might suggest to a budget committee that excess funds had been allocated to maintaining conditions and that a funding cut might be in order.
- The approach to identifying condition targets by the modified approach states is summarized in Table 1. Some states were quite aggressive in their targeting; others provided for a considerable safety margin. These condition targets are found in the Required Supplementary Information (RSI) submitted by the modified approach states in their FY02 financial statements. Copies of the RSIs are provided in Appendix G to this report, which is available on line as *NCHRP Web Document 63.*
- There appeared to be more focus and certainty of purpose on subjects such as the calculation of historical asset cost than on disclosing target conditions and estimating expenditures to achieve those conditions. This may suggest that many departments have not yet fully come to grips with the policy aspects and programmatic implications of infrastructure asset management.
- States using the modified approach commented on the difficulty of estimating the annual costs of maintaining infrastructure at or above target condition levels. The application of existing management systems to this task (particularly Pavement Management System "PMS," Bridge Management System "BMS," and Maintenance Management System "MMS") was not widely mentioned.
- Several agencies continue to have concerns and questions about the details of implementation (e.g., categorization of costs). Other agencies, however, have successfully implemented GASB 34 without major issues.
- Current implementations of GASB 34 in some states may be more detailed than originally envisioned by GASB (e.g., in the number of asset classes).
- Resource requirements for implementing GASB 34 appear to be relatively nominal. Costs were generally under $500,000 for those states reporting an estimate, hours were generally under 3,000, and only five states reported hiring additional staff (one staff member each).
- Modified states were much more likely to believe that the GASB 34 exercise improved communications among the engineering, finance, and maintenance departments. However, of those states that believed communications had improved, depreciation states were more likely to indicate that this improved communication would lead to better resource allocation decisions.

TABLE 1 Performance measures used by state DOTs in GASB 34 financial reporting for FY 2002

State	Asset Class	Measure	Description	Latest Value	2002 Target
Alabama	Pavements	Distress Rating	0-100 scale assigned to 50m segments based on roughness, cracking, rutting, patching, raveling	79.7	≥75
	Bridges	GASB 34 Bridge Rating	0-10 scale assigned to each componenet-rating category	6.69	≥5
Arizona	Pavements	Present Serviceability Rating (PSR)	0-5 scale based on subjective rating by road users	3.6	≥3.23
	Bridges	Condition Rating Index (CRI)	1-9 scale based on condition of bridge joints, deck, superstructure and substructure	93.6%	>92.5%
Colorado	Pavements	Remaining Service Life (RSL)	Poor (0-5 years), Fair (6-10 years) or Good(11+ years) based on surface distress	54% good or fair	54% good or fair
	Bridges	National Bridge Index	0-9 scale based on deck, superstructure and substructure rating	6.6% struct. deficient	≤25% struct. deficient
Delaware	Pavements	Overall Pavement Condition (OPC)	0-5 scale based on pavement distress	9.8% in poor condition	≤15% in poor condition
	Bridges	Bridge Condition Rating (BCR)	0-9 scale based on structural and deck rating	5.2% in poor condition	≤10% in poor condition
Florida	Pavements	Pavement Condition Survey	0-10 scale for pavement segments based on ride smoothness, pavement cracking and rutting	79% >6 for all 3 criteria	80% >6 for all 3 criteria
	Bridges	NBI Standards	0-9 scale based on deck, superstructure and substructure rating	93% ≥5	90% ≥5
Idaho	Pavements	Roughness Index (RI) and Cracking Index (CI)	RI - 0.0 to 5.0 based on public perception; CI - 0.0 to 5.0 for each pavement section	18% <2.5	≤18% <2.5
Indiana	Pavements	Pavement Quality Index (PQI)	0-100 scale based on 3 surface distress factors	Int - 87 NHS - 83 Other - 80	Int - 75 NHS - 75 Other - 65
	Bridges	Sufficiency Rating	0-100 scale based on 4 factors reflecting ability to remain in service	Int - 91% NHS - 91% Other - 88%	Int - 87% NHS - 85% Other - 83%
Kansas	Pavements	Performance Levels (PL)	PL1: Good condition; PL2: requires maintenance; PL3: Poor condition	Int 97% PL1 Other 91% PL1	Int ≥80% PL1 Other ≥75% PL1
	Bridges	Health Index	0-100 scale based on condition of several elements	Overall - 91	Overall ≥80
Kentucky	Pavements	Pavement Condition Index	Good, Fair and Poor based on pavement smoothness	20.6% Poor	≤30% Poor
	Bridges	NBI Standards	0-9 scale based on deck, superstructure and substructure rating	5.3% Struc. Deficient	≤7% Struc. Deficient
Maine	Pavements	Highway Adequacy	0-100 scale based on Pavement Condition Rating, safety, backlog, ADT, posted speed and shoulder	Overall - 76.6	Overall - 60
	Bridges	Sufficiency Rating	0-100 scale based on structure, functionality, essentiality and special features	Overall - 77.0	Overall - 60
Michigan	Pavements	Sufficiency Rating	Excellent, Good, Fair, Poor, Very Poor based on surface distresses	22% Poor or Very Poor	≤30% Poor or Very Poor
	Bridges	NBI Standards	0-9 scale based on deck, superstructure and substructure rating	20.9% Struct. Deficient	≤35% Struc. Deficient

(*continued on next page*)

TABLE 1 (Continued)

State	Asset Class	Measure	Description	Latest Value	2002 Target
Minnesota	Pavements	Pavement Quality Index (PQI)	0.0-4.5 scale based on smoothness and distress (cracking)	Princ. - 3.39 Other - 3.30	Princ. ≥3.0 Other ≥2.8
	Bridges	Structural Condition Rating	Good, Fair or Poor based on 3 0-9 NBI condition codes plus 2 NBI appraisal ratings	Princ. - 96% Fair to Good Other - 91% Fair to Good	Princ. - 92% Fair to Good Other - 80% Fair to Good
Nebraska	Pavements	Nebraska Serviceability Index (NSI)	0-100 scale based on surface distresses - cracking, patching, roughness, rutting, faulting	Overall - 84%	Overall ≥72%
Nevada	Pavements	International Roughness Index (IRI) by road classification (I-V)	Profile index based on vehicle response to roughness (lower=smoother)	I - 83% <80 II - 77% <80 III - 86% <80 IV - 65% <80 V - 19% <80	I - 70% <80 II - 65% <80 III - 60% <80 IV - 40% <80 V - 10% <80
	Bridges	Condition Level		6% substandard	≤10% substandard
Ohio	Pavements	Pavement Condition Rating (PCR)	1-100 scale based on cracking, potholes, deterioration, other	Priority - 78% with ≥65 PCR Other - 97% with ≥55 PCR	Priority ≥75% with ≥65 PCR Other ≥75% with ≥55 PCR
	Bridges	Appraisal Condition Rating	0-9 scale based on major structural items	97% of deck area ≥5 rating	≥85% of deck area with ≥5 rating
Tennessee	Pavements	Maitnenance Rating Index (MRI)	1-100 scale based on pavement, shoulders, roadside elements, drainage, and traffic services	Overall - 87.75	Overall ≥75
	Bridges	NBI Standards	0-9 scale based on deck, superstructure and substructure rating	80% of deck area neither Struct. Deficient nor Funct Obs	>75% of deck area neither Struct. Deficient nor Funct Obs
Texas	Pavements	Maintenance Assessment Program	1-5 scale based on pavement, traffic operations and roadside with 1=20%, 2=40%, 3=60%, 4=80% and 5=100%	Interstate 82% Other 79%	Interstate ≥80% Other ≥75%
Utah	Pavements	Ride Index	1-5 scale based on vehicle response to roughness with adjustment for pavement type	70% with ≥2.75 rating; 8% with ≤1.84 rating	50% with ≥2.75 rating; ≤15% with ≤1.84 rating
	Bridges	Structures Inventory System	1-100 scale based on condition of major elements	70% with ≥80 rating; 3% with ≤49 rating	50% with ≥80 rating; ≤15% with ≤49 rating
Washington	Pavements	Pavement Condition Index	Pavement section assigned lowest value among Pavement Structural Condition, IRI and rutting	91% with ≥40 rating	90% with ≥40 rating
	Bridges	Bridge Inventory System	Good, Fair or Poor based on NBI structural appraisal	97% with Good or Fair rating	95% with Good or Fair rating
Wisconsin	Pavements	International Roughness Index (IRI)	0-5 index based on vehicle response to roughness (lower=smoother)	5% with Poor rating	≤15% with Poor rating
	Bridges	NBI Standards	0-9 scale based on deck, superstructure and substructure rating	7.6% Struc. Deficient	≤15% Struc. Deficient
Wyoming	Pavements	Pavement Serviceability Rating (PSR)	0-5 scale based on ride, rutting and cracking	NHS - 3.56 Other - 3.24	NHS - 3.5 Other - 3.0
	Bridges	Sufficiency Rating	0-100 scale based on structure and functionality to determine whether acceptable	NHS - 85% Other - 84%	NHS - 83% Other - 80%

Sources:
FY2002 Comprehensive Annual Financial Reports

- The states reported considerable diversity of approach in their costing methodologies. For example, there was little unanimity regarding the following:
  – The approach to calculating historical cost;
  – The distribution of costs among maintenance, preservation, and capital categories; and
  – The appropriate point in the project development process to capitalize costs.

  In some cases, the differences may be a matter of nomenclature rather than of substantive practice. These subjects may warrant further consideration by the AASHTO Finance Committee.
- Many states expressed interest in seeing the survey results and learning about how other states plan to use the information produced for the GASB 34 reports.

CASE STUDY INTERVIEWS

The panel selected six state DOTs—Michigan, South Carolina, Tennessee, Texas, Vermont, and Washington—to be the subjects of follow-up case study interviews. To facilitate comparison of the interview results, a structured question-and-answer format, tied to survey topics, was developed by the research team.

Although the interviews benefited from the structure of prepared questions, the research team did not rigidly follow this format. If a topic was of particular interest to a state, or a state had employed an especially noteworthy approach, the research team tried to follow that discussion wherever it might lead. The research team thought that the information thus obtained was more important than ensuring that each particular question was specifically addressed by each state. All interviews were conducted by at least two, and sometimes three, members of the research team. On the DOT side, participants ranged in number from 2 to 10.

Three of the interviewees (i.e., Michigan, Tennessee, and Washington) were modified approach states, two (i.e., South Carolina and Vermont) selected the depreciation approach, and one (i.e., Texas) used both approaches for different major asset classes. The selection of approach was influenced by many factors, but the most important appears to be the maturity of the DOT's asset management information system. Those DOTs with systems in place that generated the information necessary to support the modified approach tended to select that approach; absent such systems, the depreciation approach was preferred. Seven areas of discussion were judged to be of particular interest:

- Implementation procedure/organization—each of the interviewed DOTs had some degree of involvement with central state finance entities (e.g., comptroller's office, division of finance and administration, or state auditor), but in all cases the DOT's infrastructure assets represented the overwhelming majority of state total assets. The DOTs primarily relied on internal committees to conduct the work with little or no contribution from new hires or consultants. An early start was generally deemed critical to success, with 18 months prior to the close of FY02 the typical beginning date.
- Determination of condition targets—for modified approach states, the calculation of meaningful condition targets was a key step in the process and various methods were employed. Different condition targets were adopted for the two principal asset classes, roads and bridges. Fiscal constraint was an important aspect in determining these targets in order to ensure that they were realistic.
- Estimated cost to achieve targets—linking targeted conditions to required expenditures is problematic for the modified approach states. The principal difficulties

are that (a) the management information systems, as deployed at the time, were not mature enough to generate reliable expenditure estimates; and (b) the cost definitions contained in GASB 34 were not compatible with the DOTs' budget practices and management systems (see next bullet). For several reasons, the DOTs are working to improve their performance on the first issue; there is less interest in addressing the second. Several DOTs made the point that they view the comparison between planned and actual expenditures as much less significant than the comparison between targeted and actual conditions.

- Categorization of costs—a related source of difficulty is the categorization of costs among capital, preservation, and maintenance. The GASB 34 guidelines use a functional approach to these categories—maintenance costs achieve the original design life; preservation costs extend that design life, but do not increase capacity or service; and capital costs increase capacity or service. However, the traditional DOT definitions relate more to type of construction—a full reconstruction project is viewed as capital, whether or not lanes are added; a resurfacing project is viewed as preservation, whether or not there are ancillary safety benefits. A potential solution is to allocate costs within a project to the three categories, but this is strongly resisted as impractical by the DOTs, which typically must account for hundreds, if not thousands, of projects each year. The conflict between traditional and GASB 34 categories is particularly pronounced for the division of capital and preservation. Accordingly, this discrepancy is less significant for depreciation approach states because those states capitalize both categories. Some DOTs have questioned the degree to which the difference between the structures is material in the overall financial statements.
- Estimated historical costs—to reduce the burden associated with estimating historical costs, GASB 34 deferred the effective date of this requirement for 4 years and further provided that it was necessary to report costs incurred only since July 1, 1980. However, each of the interviewed states elected to report historical costs in the initial year of GASB 34 implementation, and four of the six went back to well before 1980. Estimates were prepared using a combination of costs identified in *AASHO: The First 50 Years,* financial statements, project records, and written down replacement costs.
- Additions and retirements—the reporting of additions to and retirements of infrastructure assets for the first time in the financial statements was troublesome for many DOTs. Although DOTs typically track such changes in physical assets through management programs and other inventory records, a link to costs recorded in the accounting system typically did not exist. Many states found it necessary to initially accomplish this linkage manually and with other ad hoc methods. Most have now developed automated links.
- Usefulness of and interest in information—there was general agreement among the interviewed DOTs that the information generated in the GASB 34 exercise was potentially useful in budgeting and resource allocation, particularly the information included in Required Supplemental Information for the modified approach states. However, all reported in FY02 that the benefit remained a potential and was not realized—the new information generated virtually no interest or inquiries outside the agencies. One DOT observed that this is just the first year of implementation. General interest probably will increase as the accuracy of the information improves and as a time series of validated data becomes available and trends can be observed.

5TH ANNUAL ASSET MANAGEMENT CONFERENCE

The research team was invited to present summary findings of the project's survey and interviews at the 5th Annual Asset Management Conference, sponsored by TRB, AASHTO, and FHWA, which was conducted in September and October of 2003. The presentations were generally well received with lively question-and-answer discussions. Of particular interest, however, were several anecdotal reports from local governments that they had received improved bond ratings after preparing FY02 financial statements in accordance with GASB 34's modified approach. The bond rating agencies did not officially disclose the reasons for rating adjustments, but the governments involved seemed convinced that the modified approach was responsible. The state DOTs used the Management Discussion & Analysis materials to disclose that they were effectively preserving their infrastructure and thereby were not accumulating unfunded liabilities for future generations to address. The state DOTs also reported that the rating agencies were favorably impressed by this analysis and adjusted ratings accordingly.

The research team has not had the opportunity to confirm that the modified approach was the reason for the improved ratings, but, if true, confirmation would have major implications for the state DOTs as they continue to assess their approach to complying with GASB 34.

INFORMATION GAPS AND RESEARCH NEEDS

While conducting the initial survey and follow-up case study interviews on GASB 34 implementation, the research team became aware of several issues and concerns of the state DOTs requiring additional information and research. More specifically, there is a need for more detailed research on condition assessments and preservation methods that will (a) allow more integration of asset management data into the financial statement reporting process and (b) lead to better preservation results.

The specific topics proposed for additional research are listed below. For all of these topics, the intention is not to identify the single "right" answer, but to develop a list of recommended best practices from which the DOTs can select an alternative that reflects their specific circumstances. This approach is consistent with current GASB thinking, which is moving toward principle-based standards rather than a more prescriptive detail-oriented approach. The following topics are recommended for additional research:

- Methods for Condition Assessments—a consistent condition assessment methodology has not yet been developed.
- Linking Condition Targets to Required Expenditures—virtually all modified approach states experienced difficulty in estimating the expenditure level necessary to achieve targeted conditions.
- Cost Categories (Capitalized versus Expensed)—there is a discrepancy between GASB 34 cost categories and what is traditionally used by DOTs. The GASB 34 guidelines use a functional approach to these categories, while the traditional DOT definitions relate more to the type of construction. These definitions are significant because they determine whether costs are to be capitalized or expensed in the financial statements.
- Additions and Retirements—most DOTs had difficulty in accounting for additions to and retirements of infrastructure assets in their financial statements.

- Required Shift to Depreciation—several DOTs questioned the wisdom of requiring a state to shift from the modified approach to depreciation if the condition targets were not achieved.
- Potential Effect on Bond Ratings—additional research is needed to confirm whether or not improved bond ratings for local governments have occurred as a result of adherence to the modified approach and, if so, to better understand what factors are important in the bond rating agencies' review.

Each of these research topics is discussed in greater detail in Appendix G which is available as part of *NCHRP Web Document 63.* The research team suggests that recommendations be developed for each of the topics, to be presented at a second state DOT conference on GASB 34 implementation.

CHAPTER 1

SUMMARY OF PREVIOUS SURVEYS AND LITERATURE REVIEW

Before drafting survey questions, the research team reviewed previous surveys, existing literature, and current studies on the approaches taken by state DOTs to comply with GASB 34 requirements. The research team (1) uncovered the strengths and weaknesses in previously conducted surveys and (2) integrated areas of concern for the DOTs into the draft survey.

TENNESSEE DOT SURVEY—JUNE 2001

PB Consult's earlier participation in (1) the survey conducted by the Tennessee DOT and (2) the GASB 34 conference sponsored by the Tennessee DOT provided valuable insight into constructing a more comprehensive survey instrument. Of the 37 responding states, close to 60% had decided on or were leaning toward the modified approach. This early inclination toward the modified approach led the research team to incorporate many detailed questions about the mechanics of implementing the modified approach. However, because at least 40% of the states anticipated implementing the depreciation method, the research team balanced the NCHRP survey with a broad array of detailed questions on depreciation as well.

The Tennessee DOT survey provided an interesting backdrop to the results of the NCHRP survey. Although 60% of states were initially inclined toward implementing the modified approach, this percentage decreased to 44% when the states reported for the first time under their respective programs for GASB 34 compliance.

NATIONAL ASSOCIATION OF STATE AUDITORS, COMPTROLLERS, AND TREASURERS SURVEY

The research team studied a 2001 survey and an "Implementation Database" originally developed in 1999 by the National Association of State Auditors, Comptrollers, and Treasurers (NASACT). The database was updated on a rolling basis as governments submitted questions and responses. The database was set up as a clearinghouse for questions and proposed solutions that arose as states and localities began to implement GASB 34. This review of these resources provided insight into the challenges facing public entities preparing to implement GASB 34.

The NASACT survey findings were that, of the 28 respondents, approximately one-half (13) planned to implement the modified approach and an equal number of states planned to implement depreciation; two states were planning to implement both methods. The NASACT survey and database provided a great deal of information about the states' most challenging issues.

GEORGIA DOT SURVEY

With 100 questions, the Georgia DOT survey explored many implementation issues in detail. The Georgia DOT survey provided useful indications for the NCHRP survey in anticipating the challenge states would have in developing a method to establish historical cost and current value. However, the pool of participating states was limited to 27. Of the responding states, 14 (52%) anticipated that they would later implement the modified approach for roads; 12 states (44%) anticipated that they would use the modified approach for bridges.

NCHRP SURVEY

In performing the NCHRP survey, the research team gained important insights to further probe from the previous survey questions and results. Those areas included, but were not limited to, the following categories:

- Methods of classifying assets,
- Key issues by classifying asset,
- Most challenging compliance issues,
- Innovative approaches by classifying asset, and
- Impact on departmental operations and finances.

As a result of this review and the research team's own knowledge of asset management and GASB 34, the research team identified several topics for further exploration. Members of the research team independently proposed questions to be asked in phone interviews with select DOTs. After a

review process, the team used a final set of 14 questions to conduct phone interviews with 11 DOTs. The research team conducted interviews lasting between 30 and 60 minutes, which produced additional insights to help develop the larger survey. Typically, the person interviewed was the DOT Chief Financial Officer (CFO), although in some cases the person heading the GASB 34 implementation initiative had a different title. The research team reviewed these preliminary surveys to determine additional issues not yet covered by the team and to word questions using terminology that was common and clear to those who would be responding to the longer survey.

CHAPTER 2

PROCESS FOR DEVELOPING THE SURVEY INSTRUMENT

QUESTIONNAIRE DESIGN

A draft of the longer survey to be administered to the entire pool of DOTs was assembled after the completion of the phone interviews. After independent review by members of the research team, each question and its multiple choice answers were critiqued by the group as a whole. After several review sessions, a draft of approximately 60 questions was completed and ready for pretest.

QUESTIONNAIRE PRETEST

In June of 2002, the research team conducted a questionnaire pretest with the Louisiana and Texas DOTs. During the pretest, the research team evaluated the questions to assess the respondents' comprehension, points of confusion or ambiguity, reactions to questions, time to recover information from memory, response formation, and other variables that would affect the quality of responses and overall success of the survey.

Based on the pretest, the following questions were added to the survey:

- Number 11(b), Valuation of Transferred Assets,
- Number 12(b), Hours of Staff Time Required to Implement GASB 34, and
- Number 52, Overall Usefulness of GASB 34 Reporting.

After pretest amendments were made, the presentation strategy of the survey was completed. The questionnaire was designed as a self-administered instrument. Two questionnaire versions were developed: the first version was a web-based version; the second was a print version for mailing. To minimize response differences that might result from these two methods of administration, the questions in the web and mail versions were the same. For the web-based instrument, interactive elements were added to enhance the ease of completion.

WEB-SURVEY PROGRAMMING

Survey programmers customized a web instrument that was simple and easy to complete. The web questionnaire was introduced with a welcome screen and a message that emphasized the ease of responding and instructed respondents on the action needed to proceed to the next page. Each subsequent question was presented in a format identical to the print version of the questionnaire. Special response or skip instructions were part of the relevant questions. A progress bar on the screen showed participants how close they were to completing the questionnaire.

SURVEY ADMINISTRATION

In September 2002, the research team distributed a letter to the Chief Executive Officers (CEOs) of the 50 state DOTs plus the District of Columbia DOT and Puerto Rico DOT, describing the GASB 34 survey, and asking each CEO to designate a contact individual for this project. The DOTs' responses to this request guided subsequent interactions with the individual departments.

In October 2002, the research team submitted the revised draft survey instrument to NCHRP Panel 19-04 for review. The research team subsequently received comments from the panel and, in November 2002, provided an adapted survey that addressed the reviewers' concerns. Most of the panel's comments involved changes in wording and phrasing that made questions and multiple choice answers more concise. Approximately 15 answer choices were added to various questions, two questions found redundant were removed from the survey, and six questions were added to the survey. The six new questions focused on the following topics:

- The use of condition assessment information by states using depreciation,
- The states' view of the overall usefulness of information generated by the reporting requirements of GASB 34,
- The ability of the states' accounting system to identify costs at the asset class level desired, and
- How useful lives of infrastructure assets were determined.

After reviewing the updated version, NCHRP authorized the survey to be administered to the DOTs.

The survey was administered to the 52 DOTs in early December 2002. The printed surveys were mailed to the contacts identified by the CEOs with cover letters explaining who the research team represented and the goal of the survey. Additionally the letter explained how the respondent could

respond to the survey privately via the internet and advised each that a copy of the DOT's fiscal year 2002 financial statements would be requested after the survey was completed.

The research team was able to monitor the progress of those DOTs that were completing the survey on line. A first round of follow-up calls was made to the DOTs that had not started the survey. A second round of calls was made in mid-January. The research team allowed DOTs approximately 10 weeks to complete the survey. Because a 100% response rate was the team's goal, frequent calls were made in February to DOTs that had not yet completed their surveys. Finally, the team adopted a final deadline date of February 21, 2003. At that point only two DOTs, New York and Rhode Island, had not completed the survey.

New York's situation was that its fiscal year ends March 31st. The initial phase of the GASB 34 reporting requirements was effective for fiscal years beginning after June 15, 2001. Hence, the effective date for New York lags the other states by 6 to 9 months. Unlike the other DOTs, New York had not yet completed its first set of financial statements under GASB 34 guidelines at the time of the survey and thus found it difficult to respond to many of the survey questions. In addition, relatively late in the process the New York DOT decided to switch from the depreciation approach to the modified approach, further complicating efforts to complete the survey in a timely manner.

Detailed findings are presented in Appendix D to this report, which is available in *NCHRP Web Document 63.*

CHAPTER **3**

IDENTIFICATION OF CANDIDATES FOR CASE STUDY ANALYSES

The research team was charged with selecting four to six DOTs for case study analyses. These were to be DOTs that have been particularly thorough, innovative, or representative in their approaches to meeting the GASB 34 requirements, in particular with respect to the key issues identified.

In particular, the researchers considered the responses to questions dealing with the intended purposes for the GASB 34 reports and how extensively the DOT implemented the new reporting approach. In the interest of having a representative sample, the team also viewed it as appropriate to identify at least one department that expressed skepticism regarding the utility of the GASB 34 exercise.

With all of these considerations in mind, the research team members each developed a list of nominations. In doing so, members were mindful that both the depreciation approach and the modified approach had many adherents among the state DOTs. The team thought it appropriate that there be a similar division between the case studies. Another consideration was geographical diversity—the team thought that each of the AASHTO regions should be represented.

The team then condensed individual nominations into a single list recommended by the team. The recommended case study departments are as follows:

- Illinois—depreciation approach, AASHTO Region 3, GASB 34 skeptic;
- South Carolina—depreciation approach, AASHTO Region 2, change in approach anticipated;
- Tennessee—modified approach, AASHTO Region 2, GASB 34 champion;
- Texas—combination approach, AASHTO Region 4, major system modifications;
- Vermont—depreciation approach, AASHTO Region 1, interest in using GASB 34 information; and
- Washington—modified approach, AASHTO Region 4, emphasis on condition assessment.

At the May 12, 2003, meeting of NCHRP Panel 19-04, the panel members decided to substitute Michigan for Illinois in view of Michigan's leadership role in asset management. In addition, the panel authorized the research team to conduct two of the interviews by telephone and the remaining four interviews in person.

CHAPTER 4

CASE STUDY OVERVIEW

PROCEDURES

Case study interviews were conducted with six state DOTs—three (i.e., Michigan, Tennessee, and Washington) were modified approach states, two (i.e., South Carolina and Vermont) selected the depreciation approach, and one (i.e., Texas) used both approaches for different major asset classes.

Four of the interviews (i.e., South Carolina, Tennessee, Texas, and Washington) were conducted on site during all-day sessions. In the interest of economy, two interviews (i.e., Michigan and Vermont) were conducted via extended conference calls. To facilitate comparison of the interview results, a structured question-and-answer format, tied to survey topics, was developed by the research team. A generic version of this interview structure was previously submitted to the NCHRP panel for review and comment. The panel approved the structure with some comments and suggestions, which were incorporated into the document. Individualized interview structures were then developed for each of the six states, tied to each state's specific responses to the electronic survey.

The individualized interview questions were then transmitted to each of the states at least 2 weeks before the interview date to permit them to conduct any necessary research and to identify the appropriate personnel to take part. For the on-site interviews, the research team conducted a series of sessions with each of the Department offices involved in GASB 34 implementation and met with a representative from the State Comptroller's Office or other member from the central state government. These sessions were generally conducted without monitoring from the Department finance office in order to encourage a candid expression of views. Other office representatives were asked only those questions that affected their areas of responsibility.

Although the interviews benefited from the structure of prepared questions, the research team did not rigidly follow this format. If a topic was of particular interest to a state representative or that participant's state had employed an especially noteworthy approach, the researchers tried to follow that discussion wherever it might lead. It was thought that the particulars thus obtained were more important than ensuring that each particular question was rigidly addressed by each state. All interviews were conducted by at least two, and sometimes three, members of the research team. On the DOT side, participants ranged in number from 2 to 10.

Following the interviews, the research team prepared a summary of the remarks and provided these to each state for review and comment. All comments suggested by the states were accepted and incorporated into the reports, as reflected in Appendix F to this report (which is available in *NCHRP Web Document 63*).

OVERVIEW

The selection of approach—modified or depreciation—was influenced by many factors, but the most important appears to be the maturity of the DOT's asset management information system. Those DOTs with information systems in place that generated the information necessary to support the modified approach tended to select that approach; absent such systems, the depreciation approach was preferred.

The detailed questionnaires that follow this section address a wide range of GASB 34 implementation issues, while this overview focuses on seven issues judged to be of particular interest:

- **Implementation procedure/organization—**each of the interviewed DOTs had some involvement with central state finance entities (e.g., comptroller's office, division of finance and administration, or state auditor), but in all cases the DOT's infrastructure assets represented the overwhelming majority of the state total. The DOTs primarily relied on internal committees to conduct the work with little or no contribution from new hires or consultants. An early start was generally deemed to be critical to success, with 18 months prior to the close of FY02 the typical beginning date.
- **Determination of condition targets—**for modified approach states, the calculation of meaningful condition targets was a key step in the process, and various methods were employed. Different condition targets were adopted for the two principal asset classes, roads and bridges; targets were not established for other asset classes. Fiscal constraint was an important aspect in determining these targets in order to ensure that they were realistic.
- **Estimated cost to achieve targets—**linking targeted conditions to required expenditures is problematic for the modified approach states. The principal difficulties

are that (1) the management information systems, as deployed at the time, were not mature enough to generate reliable estimates and (2) the cost definitions contained in GASB 34 were not compatible with the DOTs' budget practices and management systems. For several reasons, the DOTs are working to improve their performance on the first issue; there is less interest in addressing the second. Several DOTs made the point that they view the comparison between planned and actual expenditures as much less significant than the comparison between targeted and actual conditions.

- **Categorization of costs—**a related source of difficulty is the categorization of costs among capital, preservation, and maintenance. The GASB 34 guidelines use a functional approach to these categories—maintenance costs achieve the original design life; preservation costs extend that design life, but do not increase capacity or service; and capital costs increase capacity or service. However, the traditional DOT definitions relate more to type of construction—a full reconstruction project is viewed as capital whether or not lanes are added; a resurfacing project is viewed as preservation whether or not there are ancillary safety benefits. A potential solution is to allocate costs within a project to the three categories, but this is strongly resisted as impractical by the DOTs, which typically must account for hundreds, if not thousands, of projects each year. The conflict between traditional and GASB 34 categories is particularly pronounced for the division between capital and preservation. Accordingly, this discrepancy is less significant for depreciation approach states because those states capitalize both categories, but it is important for modified approach states where preservation costs are supposed to be expensed. Some DOTs have questioned the degree to which the difference between the structures is material in the overall financial statements.
- **Estimated historical costs—**in order to reduce the burden associated with estimating historical costs, GASB 34 deferred the effective date of this requirement for 4 years and further provided that it was necessary to report costs incurred only since July 1, 1980. However, each of the interviewed states elected to report historical costs in the initial year of GASB 34 implementation, and four of the six went back to well before 1980. Estimates were prepared using a combination of *AASHO: The First 50 Years,* financial statements, project records, and written down replacement costs.
- **Additions and retirements—**the reporting of additions to and retirements of infrastructure assets in the financial statements was troublesome for many DOTs. Although DOTs typically track such changes in physical assets through management programs and other inventory records, a link to costs recorded in the accounting system typically did not exist. Many states initially found it necessary to achieve this link manually and with other ad hoc methods. Most have now developed automated links.
- **Usefulness of and interest in information—**there was general agreement among the interviewed DOTs that the information generated in the GASB 34 exercise was potentially useful in budgeting and resource allocation, particularly the information included in Required Supplemental Information for the modified approach states. However, all reported that in FY02 that benefit remained a potential and was not realized—the new information generated virtually no interest or inquiries outside the agencies. One DOT observed that this is just the first year of implementation. It expects that general interest will increase as the accuracy of the information improves and as a time series of validated data becomes available and trends can be observed.

MICHIGAN

Michigan DOT (MiDOT) decided on the modified approach on the basis of its long tradition (25 years) of asset management and its commitment to the asset management philosophy. The following items from the interviews were deemed to be particularly noteworthy:

- MiDOT received guidance from the state comptroller and state auditor, but the bulk of the work was completed within the Department and was accomplished without benefit of a formal committee structure.
- A conservative approach to selecting the condition targets was used, with the targets well below current conditions.
- The Department had difficulty in computing the estimated expenditure levels necessary to achieve these targets, in part because the GASB structure and definitions for the Required Supplementary Information were not compatible with MiDOT budget and management procedures.
- MiDOT categorized a full reconstruction as a capital cost, even if the number of lanes remained the same, on the theory that full reconstruction inevitably improves service levels based on current design standards. The Department did not differentiate between preservation and maintenance expenditures. Such differentiation was not deemed necessary because both categories are expensed in the financial statements.
- For historical costs, MiDOT indexed all expenditures back to the average year of construction.
- Unlike many states, Michigan did not have difficulty in accounting for additions to and retirements from the infrastructure network. The Department used 250 work type codes to classify a project as either capital or preservation/maintenance (see case study for listing). Costs are initially recorded as "construction in progress" and then transferred to the appropriate accounts on project completion. The Department did not attempt to allocate costs within a single project to capital and preservation/maintenance components, judging that to be administratively prohibitive.

- The Department reports that, thus far, GASB 34 has not had a measurable effect on resource allocation and budgeting decisions, nor have Department staff received any expressions of interest in the new information from the legislature or the general public.

SOUTH CAROLINA

In selecting the depreciation approach, South Carolina DOT's (SCDOT's) primary concern was to comply with GASB 34 in the most efficient and effective manner. SCDOT concluded that its management systems were not adequate to support the modified approach, with the key weakness being data for secondary roads. The road valuation system for secondary roads is being updated, which may lead to selection of the modified approach in the future. Another concern, however, was the potential effect of not meeting condition targets on funding levels. The following items from the interviews were deemed to be particularly noteworthy:

- GASB 34 implementation began in 2000 and was overseen by a statewide committee with consultant support. However, 95% of the assets were SCDOT's and only SCDOT assets were classified as infrastructure.
- As a depreciation approach state, SCDOT did not target condition levels or estimate the costs to achieve such targets.
- As a depreciation approach state, SCDOT grouped expenditures for preservation and capital projects together. It did not experience difficulty in differentiating these projects from maintenance expenditures.
- For historical costs, SCDOT used *AASHO: The First 50 Years* for 1914–1964 expenditures (with current replacement value used to allocate costs among roads, bridges, and right-of-way), internal financial statements for 1964 to the early 1990s and current expenditure records from the early 1990s to 2002.
- To account for additions to and retirements of infrastructure assets, SCDOT modified its procedures so that, for GASB purposes, project closing occurs when expenditures are complete (rather than when open to traffic). Additions and retirements are recorded once per year by journal entry.
- SCDOT acknowledged that the depreciation approach provides less meaningful information because it is inconsistent with the Department's preservation program and the nature of infrastructure assets. However, it sees a danger in modified approach data being used to make inappropriate comparisons with other DOTs or budgets. Accordingly, SCDOT recommends that more detailed standards be developed for condition assessments and disclosures to minimize the possibility of unfair disclosures caused by inconsistencies.

TENNESSEE

Tennessee DOT (TDOT) assumed from the outset that it would use the modified approach and did not seriously consider the alternative. Existing management systems—in particular, the Tennessee Road Information Management System (TRIMS), the bridge management system (PONTIS), and the Maintenance Management System (MMS)—generate the necessary data, and the asset management approach is consistent with the Department's philosophy. The following items from the interviews were deemed to be particularly noteworthy:

- Tennessee began implementing the modified approach earlier than most—in mid-1999, just before the formal publication of GASB 34. It was essentially a TDOT effort, but the Department met early with the Department of Finance and Administration and the state auditor. An internal TDOT committee initially met quarterly, but more frequently toward the end.
- Condition targets for bridges were based on 75% of the deck area being neither structurally deficient nor functionally obsolete (the FHWA National Bridge Index goal). Condition targeting for roads was a new venture and was based on the Maintenance Rating Index (MRI) produced by the MMS. The MRI is determined for $^{1}/_{10}$ mile road segments based on a sample size of 7% annually.
- The link between targeted conditions and required expenditures is weak. Neither MMS nor PONTIS, as currently deployed, is mature enough to generate reliable cost estimates. For FY02 and FY03, estimated costs are based on projections derived from historical funding patterns.
- Projects are categorized as either capital or preservation/maintenance, and all costs within the project are in one category or the other. Allocation of costs within a project is not considered practical with over 1,500 new projects per year. A full reconstruction, even without additional lanes, is treated as capital based on the theory that current design standards will always generate significant benefits. On the other hand, a resurfacing project that might have safety benefits is classified as preservation/maintenance.
- TDOT historical costs were derived in three tiers: *AASHO: The First 50 Years* for 1914–1964 with construction costs allocated among roads, bridges, and right-of-way based on current replacement cost; high-level appropriation codes for 1964–2001; and project-level information beginning in 2001.
- In order to account for retirements from infrastructure assets, it was necessary to modify TRIMS. This was done manually for FY02 and FY03. In the future, TRIMS will generate a report on lane miles removed.
- TDOT believes that the information generated by the GASB 34 exercise is potentially useful, but, thus far, has

received no expressions of interest from elected officials or the general public. However, the Department notes that this is just the first year of implementation. It expects that general interest will increase as the accuracy of the information improves and as a time series of validated data becomes available and trends can be observed.

TEXAS

Texas DOT (TxDOT) used the modified approach for most of its assets, but selected the depreciation approach for bridges and some minor asset classes. This combination approach was used because the bridge management system (developed in house) includes a good inventory from which to make depreciation calculations, but does not have asset management functions. Another factor was that TxDOT views bridges as having a more definable lifecycle than roadways, so bridges are more appropriate to the depreciation calculation. If TxDOT develops a bridge management system with the necessary functionality, it might consider a shift to the modified approach for bridges. The following items from the interviews were deemed to be particularly noteworthy:

- The Comptroller's office led the state's overall GASB 34 implementation committee, including a Capital Asset team in which TxDOT participated. The committees met for about 1½ years—an early start was a key to success. A Capital Asset Guide was prepared and is available on the internet. In addition, an internal TxDOT committee met throughout the period.
- TxDOT developed condition targets for roadways based on a condition assessment system that sampled conditions on 5% of the network (10% for Interstates). The targets are fiscally constrained and are approved formally by the Transportation Commission.
- The correlation between targeted conditions and estimated required expenditures is weak and will require further development over the next few years. However, TxDOT believes that the comparison between targeted and actual condition levels, as opposed to the comparison between planned and actual expenditures, is the more meaningful aspect of the exercise.
- Full reconstruction of a roadway, even without addition of lanes, was categorized as a capital expense, as was a dualization project that included both new road construction and overlay of an existing roadway. There was no attempt to allocate the costs of such projects between preservation and capital because the effort would be extensive and cost prohibitive.
- Historical costs for highways were estimated through a combination of *AASHO: The First 50 Years* and TxDOT financial reports. For bridges, the current year replacement cost for each bridge category, measured by square feet of bridge deck, was indexed back to the year of construction.
- Unlike many states, TxDOT did not report difficulty in accounting for additions to and retirements of infrastructure assets. There is now an annual entry to the accounting system for construction-in-progress and fixed asset classes. The threshold for an addition is when 85% of anticipated project expenditures have occurred.
- TxDOT believes that the information generated by the GASB 34 exercise is potentially useful for resource allocation decision-making, but, to date, there has been virtually no interest in this information by elected officials or the general public. The Department is disappointed that its significant effort in seriously addressing GASB 34 has produced little benefit other than complying with the requirement.

VERMONT

The Vermont Agency of Transportation (VTrans) selected the depreciation approach, primarily because its asset management system does not meet the specific requirements of the modified approach under GASB 34. Further, VTrans views finance and accounting as inherently separate from asset management issues and does not perceive an advantage in including reports on asset condition and related matters in the financial statements. The following items from the interviews were deemed to be particularly noteworthy:

- During the implementation process, VTrans worked with the Director of Statewide Financial Reporting and the State Auditor, but there was not a statewide committee. Within VTrans, a steering committee composed of the Director of Administration and the Director of Program Development/Chief Engineer made the decisions and directed activities, which were carried out by a working committee.
- As a depreciation approach state, VTrans did not target condition levels nor estimate the costs to achieve such targets.
- As a depreciation approach state, VTrans grouped expenditures for preservation and capital projects together. It did not experience difficulty in differentiating these projects from maintenance expenditures and followed the GASB 34 guidelines without exception.
- 1980–1993 historical cost estimates were derived from project ledger data with some adjustments to exclude maintenance costs and to allocate among asset classes. From 1994 to the present, the project cost system includes detailed object codes that simplify the conversion to asset classes.
- Additions to and retirements of infrastructure assets by asset class represented new information that had to be developed by the preparation of forms for each project.

These forms identified, by asset class, which project costs were for new or replacement of infrastructure.
- The State of Vermont has not yet issued an FY02 Comprehensive Annual Financial Report (CAFR) because of a change in its accounting system. Accordingly, the GASB 34 disclosures are not yet publicly available. VTrans believes that the information generated in the modified approach would be useful in preparing budgets and making the case for funding infrastructure preservation. Some of this same type of information might be developed under the depreciation approach.

WASHINGTON

Washington DOT (WSDOT) used the modified approach based on a good asset management system already in place. It did not want to use a different methodology for GASB 34 purposes. However, absent the existing pavement and bridge management systems, it may have been encouraged to adopt the depreciation approach. The following items from the interviews were deemed to be particularly noteworthy:

- WSDOT employed a relatively structured implementation procedure organizationally, using both an executive committee and a working committee that held quarterly meetings with the State Office of Financial Management.
- Condition targets were derived from budget allocations that were then translated into expected conditions. This was a fiscally constrained approach following a methodology developed years ago.
- The Required Supplementary Information (RSI) comparison between planned and actual expenditures was difficult because the asset management system is organized by program, rather than by cost category. The reported amounts were derived from budgetary information, less amounts capitalized in the preservation program.
- Regarding cost categorization, the GASB definition of preservation presented difficulties. For asset management purposes, WSDOT considers the complete reconstruction of a roadway as a new asset that should be capitalized. Reconstruction inevitably results in improvements reflecting current design standards. Allocation of project expenditures between capital and preservation was considered impractical, with hundreds of projects per year. WSDOT suggests that GASB evaluate a more sophisticated approach for categorizing capital, preservation, and maintenance costs and that FHWA definitions be considered.
- For historical costs, WSDOT went back to 1980 and used actual capital outlay costs in construction programs. Cost data were accumulated from different accounting and asset management data sources and required ad hoc reporting.
- Before GASB 34 there was no need to link asset management data with financial statements. Thus, it was difficult in FY02 to account for additions to and retirements of infrastructure assets. WSDOT developed ad hoc reporting to accomplish this accounting; in the future it is anticipated that the link will be automated.
- WSDOT hopes that in the future the GASB 34 information will be useful in making the case for funding infrastructure preservation (although this did not occur in the initial year of implementation). In this regard, WSDOT questions the wisdom of requiring a shift to the depreciation method if condition targets are not being met—a failure to meet condition targets should be publicly disclosed, and this would be lost under depreciation.

CHAPTER **5**

CASE STUDY INTERVIEW QUESTIONS AND RESPONSES

This chapter presents the survey dialog and the responses recorded from each of the six case study interviews conducted. The questions are listed in the order they were asked with the response following each question.

These interviews were conducted in an informal, open manner to bring to life the details of the processes the DOTs went through to plan and implement the provisions of GASB 34. Thus, for each topic in the following section, several questions may be listed that were not responded to in a "line-by-line" fashion.

MICHIGAN

Interview with Ann Dennis and Patrick McCarthy

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: The GASB 34 infrastructure implementation effort was not all that easy—1 1/2 years of advance planning was necessary. It required interaction with a lot of people, mostly towards the end when the auditors became involved. It was hoped that many of the implementation decisions would be totally agreed upon early on, but that did not happen. At the end the auditors raised issues such as those concerning land, primarily because recent purchases by the state have been above fair market value. The state controller helped resolve the issues with research. Another hurdle was highway ramps, for which asset management data are not available. Overall, we are satisfied with the results. No effect on budgeting and decision making has been noted.

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that the DOT CFO, the Chief Engineer and the Chief Accountant determined policies to implement the GASB 34 infrastructure requirements. Tell us more about how that worked. How many times did that group meet? Who chaired the committee? Was it effective in airing all views and building consensus?

Response: No formal committee to implement the GASB 34 infrastructure provisions was established in Michigan. Financial operations of the DOT led the effort and jumped on GASB 34 issues early. The planning office also played an important role. We believe an early start is key to a smooth implementation. Ad hoc meetings were held with others as needed. Towards the end, meetings with the DOT CFO were held fairly regularly.

Topic 2: Outside Inquires (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: Only the auditors had a lot of interest in this project. We believe there are not many readers of the CAFR. No infrastructure audit had been performed before GASB 34. The auditors raised good questions, but sometimes they were concerned about immaterial items and sometimes it was difficult to convince them of alternatives to their views (GASB clearly permits and some would say encourages alternatives). These concerns pertained only to the historical cost calculations and not to the ongoing infrastructure addition and deletion calculations, with which the auditors generally agreed.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the modified approach was consistency with the department's asset management philosophy. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: The DOT already had a good asset management system with over 25 years of history. Our state wanted to speak with one voice. So why shouldn't the state comptroller report information from that system rather than depreciation calculations which are not part of that system?

Topic 4: Selection of Approach (Survey Question Reference 2): You noted that in selecting the modified approach, you did not seriously consider the alternative. What was the reason for this? Who was primarily involved in the decision (e.g., was it an agency decision or was the decision made at the state government level?)? In general, what do you see as the advantages/disadvantages of each approach? Was the potential effect on DOT funding a consideration in your selection? In what way—please explain.

Response: See above.

Topic 5: Perspectives (Survey Question Reference 3 and 34): You noted no significant difference in perspectives among stakeholders as to which approach (depreciation/modified) to use. This is a different answer than what we expected based upon what we were hearing elsewhere (e.g., finance wants depreciation and engineers want modified). Any thoughts or observations as to what generated the consensus in your state? Or was it decided by a single office without much consultation?

Response: There never really was a perspective difference within DOT. Only a few people in DOT dealt with GASB 34 infrastructure issues and they all agreed on the approach. State officials did not object at any time. Accordingly, there was very little discussion involved in the decision.

Topic 6: Challenges (Survey Question Reference 7): You indicated that the modified approach is more challenging to

implement. Please explain your reasoning. How do you see the role of your department's management systems and data in supporting the modified approach?

Response: Depreciation is a calculation. It does not require much effort other than determining lives and salvage value. Asset management used for the modified approach involves more understanding of the different types of infrastructure and related condition assessments. That understanding might not matter so much for depreciation. Accountants are familiar with depreciation but have a learning curve for the modified approach. We did use deprecation for ramps and buildings due to the lack of asset management information.

Topic 7: Condition Targets (Survey Question Reference 31): GASB requires that you specify annual targets for condition and planned budget expenditures for infrastructure assets. How has your agency determined these targets? Are the GASB targets consistent with performance targets used in your asset management? Was a financial check done to see if these targets are feasible given planned program budgets?

Response: We wanted the target low enough so we wouldn't likely go under it but we also wanted to be realistic. The Director wanted a somewhat more aggressive target that he could use, as appropriate, to justify funding requests. We reached a compromise. In Michigan no new money is currently available—funding results from a shift in appropriations. Since the target was well below actual conditions, a financial check wasn't deemed to be necessary.

Topic 8: Additions and Retirements (Survey Question Reference 1): Unlike many states, your response did not indicate that difficulty in accounting for additions to and retirements of infrastructure assets is significant. How did you keep track of these additions and retirements? Was this the same process as used before GASB 34?

Response: We have 250 work type codes in the system (see attached for listing, Appendix VI). Fortunately, the auditors did not have problems with the codes. These codes clearly indicate whether the project is considered to be capital or preservation/maintenance. We will use the codes in the future to roll forward costs for average year of construction purposes—i.e. new road values will be based on average cost by year of construction. Two important points:

- Our codes consider complete reconstruction of roadway to be capital additions because we believe we are constructing a new product and that inevitably there are improvements to service based upon current standards.
- Projects in their entireties were treated as one category or the other; there was no attempt to allocate costs within a single project to capital and preservation/maintenance components; that was judged to be administratively prohibitive.

We use the codes to identify expenditures as capitalizable or expendable.

Topic 9: Categorization of Costs (Survey Question Reference 27): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? You indicated that you do not differentiate between Preservation and Maintenance for GASB purposes. How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: This matter doesn't make a difference for the modified approach—both preservation and maintenance costs are expensed in the financial statements. In other words, we followed the GASB accounting guidelines regardless of the label assigned to the costs.

Topic 10: Estimating Costs of Preservation (Survey Question Reference 29): You indicated difficulty in estimating the costs of preservation for purposes of GASB disclosures. What exactly were these difficulties? How did you go about overcoming them? Did your agency apply management systems (e.g., PMS, BMS, MMS) to estimate these costs? Were you concerned about the impact of these disclosures?

Response: In our state, budget numbers for infrastructure generally are not prepared on an annual basis and are not set up to distinguish preservation from maintenance costs. The ways we budget for and manage infrastructure assets do not necessarily fit GASB RSI requirements. We believe the GASB disclosure requirement should have addressed all infrastructure budgeting considerations. For example, the DOT may decide to construct more new roads and do less preservation because there is not enough deterioration in the condition assessments to be of concern. GASB's focus on preservation costs only is too narrow to reflect decisions like this.

Also, there is a problem with projects being budgeted in one year with funds expensed over several years. This means that the comparison in the RSI is not apples-to-apples.

Topic 11: Asset Classes (Survey Question Reference 28): You indicated five asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: Actually, we used two principal asset classes—roads and bridges—for the modified approach. Ramps and buildings were depreciated. In the CAFR, all assets were lumped together under infrastructure and land.

Topic 12: Asset Threshold (Survey Question Reference 39): You reported that no capitalization thresholds were used to determine whether assets were significant enough to report? Are unofficial "rules of thumb" employed?

Response: None.

Topic 13: Capitalization (Survey Question Reference 38): You indicated that project costs are accrued and capitalized each year. Please describe how the DOT defines capitalization.

Response: All costs are recorded in "construction in progress" as incurred. They are transferred to individual capital asset accounts when the project is complete.

Topic 14: Historical Cost (Survey Question Reference 41): You indicated financial statements, bond and budget records and the department's asset management system as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: All costs were indexed back to the average year of construction. In the survey we should not have checked bond and budget records and financial statements.

Topic 15: Book and Replacement Value (Survey Question Reference 50): Your department reported an overall book value of $15 billion. Please describe how this estimate was calculated.

Response: See discussion above.

Topic 16: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (useful in preparing budgeting & funding requests and in making the case for funding infrastructure). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: Our survey response reflected the Director's comment about the GASB 34 information potentially supporting the case for increased funding. However, federal money and its requirements are far more important to us.

Topic 17: Condition Targets (Survey Question Reference 44): In response to question #44, you indicated that condition assessments will be used to aid in budgeting & funding requests and develop long range plans. Do condition targets influence the size of the preservation budget?

Response: Theoretically, yes but this has yet to be demonstrated. There is no mention of GASB whatsoever in our current budget requests.

Topic 18: Communications (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: As noted above, lots of meetings were required. The Bureau of Planning was very helpful. Assistance from within the Department was much greater than expected.

Topic 19: Resource Allocation (Survey Question Reference 35): However, you indicated no significant improvement in resource allocation within DOT. Could you explain further? Could no improvement be because resource allocation was already good or is it that the GASB 34 implementation process simply resulted in no improvement?

Response: As noted above, so far GASB 34 has had no influence over allocations. It might be an influence if we do not meet the condition assessment targets.

Topic 20: Implementation Costs (Survey Question Reference 12): You didn't provide an estimate of costs or staff time associated with GASB 34 implementation. Has there been an increase in time and cost of the financial audit as a result of GASB 34? Please provide as much detail as possible.

Response: DOT did not assign costs to the GASB 34 infrastructure implementation.

Other Issues: You questioned the usefulness of the RSI table as currently structured because of the limitation to maintenance/preservation cost and the potential discrepancy between budgeted and actual costs due to multi-year projects. We would like to discuss this further with you.

Response: RSI doesn't tell the whole story. See response above regarding Cost Estimation (topic 10).

SOUTH CAROLINA

Interview with Robert Wilkes, Angela Feaster, Barbara Heavenor, Betsy Lawson, and Barry Laban. August 12, 2003

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: Overall, the implementation went well. We began 1½ years in advance and followed the Tennessee methodology as to valuation of the infrastructure assets. Using the depreciation approach somewhat simplified the implementation process because we needed less non-accounting involvement (e.g. paving, engineering) than we would have needed if we had used the modified approach. The Comptroller General (CG) supported the depreciation approach from the beginning for reasons discussed further at 15a and 2 below. The state's primary objective was GASB 34 compliance in the most efficient and effective way. We believe we accomplished this objective.

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that the auditors and state comptroller general assisted in the decision-making process used to implement the GASB 34 infrastructure requirements. Tell us more about how that worked. How many times did you meet? Who chaired the group? Was it effective in airing all views and building consensus?

Response: The GASB 34 implementation process began in 2000 and was overseen by a statewide GASB 34 implementation committee in which the DOT participated. This was a very formal process that was coordinated with KPMG and that required quarterly progress reporting and involved training. The committee issued formal policies for accounting for capital assets, including infrastructure. Notwithstanding the statewide nature of the process, over 95% of the assets were DOT's, and only DOT assets were classified as infrastructure. We believe this was an effective process.

Topic 2: Outside Inquiries (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: There have been no such inquiries or feedback.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the depreciation approach was inadequate asset management systems. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: The systems we use for secondary roads (which represent a significant portion of our infrastructure) do not meet the requirements that would allow us to use the modified approach. The state probably would not have a problem switching to the modified approach if we had a GASB 34 qualifying asset management system for secondary roads. We are in the process of modifying the road valuation system for secondary roads and have three field groups working on it, but this will require three years due to the size of the secondary system. We also chose not to use the modified approach for other infrastructure for which the asset management systems qualify for the modified approach. See 2 below for further discussion.

Topic 4: Selection of Approach (Survey Question Reference 2): You noted that in selecting the depreciation approach, you did not seriously consider the alternative. What was the reason for this? Who was primarily involved in the decision (e.g., was it an agency decision or was the decision made at the state government level?) In general, what do you see as the advantages/disadvantages of each approach? Was the potential effect on DOT funding a consideration in your selection? In what way—please explain.

Response: Even though we are moving towards the modified approach, we were concerned about the concept. There are political issues to be concerned about with respect to not meeting the condition targets. For example, we were concerned about the effect not meeting the targets might have on funding and allocations. Depreciation seemed like a safer route in this regard. The advantage we see to the modified approach is that it provides more meaningful information to the financial statement reader that is consistent with how we manage infrastructure. Even though the depreciation approach is easier to implement, unfortunately it presents less meaningful information because it is inconsistent with our preservation program and the nature of infrastructure assets. See further comments at 52 below.

Topic 5: Perspectives (Survey Question Reference 3 and 34): You noted a significant difference in perspectives among stakeholders as to which approach (depreciation/modified) to use. Please describe the nature of these differences and how they were resolved.

Response: There really was not a difference in the perspectives of the stakeholders, primarily because the users of the modified approach type data do not ordinarily relate to the CAFR. It would be nice if the CAFR presented information that was consistent with how we manage infrastructure, but frankly we do not have the resources to be concerned if it does otherwise.

Topic 6: Challenges (Survey Question Reference 7): You indicated that the modified approach is more challenging to implement. Please explain your reasoning. How do you see the role of a department's management systems and data in supporting the modified approach?

Response: Condition assessment information is more complex than depreciation information and requires the involvement of several non-accounting disciplines of the DOT. There are more transactions to consider, more calculations to perform each year.

Topic 7: Modifications to System (Survey Question Reference 14 and 43): You indicated minor modifications were necessary to your financial and asset management systems to comply with GASB 34. Can you describe to us what these modifications were? What GASB requirement or aspect of GASB reporting necessitated these revisions? Did the level of detail change? Were any new data collection efforts needed because of this change? How would you describe the level of effort devoted to these changes: e.g., in person-months?

Response: We had to do a lot of re-programming to account for additions and retirements in the format required by GASB 34 (see 1 below). In connection with GASB 34, the state, through the Comptroller General's Office, elected to establish new capitalization thresholds, and we had to delete from the system all assets that fell under the new threshold. We had been reporting infrastructure as an asset in the DOT's internally generated (not external) financial statements from about the mid 1960s into the early 1990s (also see 41 below). This made the implementation of GASB 34 infrastructure provisions in the state's and the DOT's CAFRs somewhat easier. This information updated to the date of the GASB 34 implementation was used as the basis for historical cost and depreciation.

Topic 8: Additions and Retirements (Survey Question Reference 1): Your response regarding the difficulty in accounting for additions to and retirements of infrastructure assets is significant. What caused these difficulties? How did you keep track of these additions and retirements before GASB 34? Are any organizational/procedural changes planned to better account for these events?

Response: The closing of "construction in progress" asset categories for management purposes differs from such closing for GASB 34 purposes. We modified our procedures so that for GASB purposes the closing occurs when the project is complete as to project expenditures. This differs from when closing occurs for management purposes—i.e., when the road is open to traffic. Retirements are recorded at replacement value deflated to year of acquisition using the consumer price index. Additions and retirements are recorded once per year by journal entry.

Topic 9: Categorization of Costs (Survey Question Reference 27): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: As a depreciation state, we group capital and preservation projects together. Capital/Preservation project costs expected to be in excess of $500,000 are capitalized in the financial statements.

Topic 10: Asset Classes (Survey Question Reference 28): You indicated four asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: There are really just two classes of infrastructure assets—roads and bridges. Roads and bridges were separated due to different depreciation rates. We should not have checked in the questionnaire buildings or ROW (which is included as part of land in the CAFR).

Topic 11: Asset Threshold (Survey Question Reference 39): You reported that a capitalization threshold of over $125K was used to determine whether assets were significant enough to report. Were different thresholds applied to different asset classes?

Response: As we noted, the threshold is $500,000 for infrastructure, which we determined jointly with the Comptroller General's Office. Our construction planning activities, as well as our organizational structure, for some time have naturally divided our maintenance efforts from our construction (capital) efforts. Our budget has been developed for years around this natural separation. In a rare instance, our maintenance workforce may complete a project which could be classified as capital (increased capacity/service or extended the design life), and this is reported to finance. Likewise, a very few construction projects may cost less than a million dollars. We use the $500,000 threshold as a reasonable point to capitalize in these unusual circumstances. For buildings, the threshold was $100,000, for equipment $5,000.

Topic 12: Asset Lives (Survey Question Reference 20): You indicated you used the advice of the state comptroller

general to estimate asset lives. Could you expand on that with specific examples?

Response: The committee established by the CG (see 32 above) looked at lives used by other states based on information received from the National Association of State Auditors, Comptrollers and Treasurers.

Topic 13: Capitalization (Survey Question Reference 38): You indicated that project costs are accrued and capitalized each year. Please describe how the DOT defines capitalization.

Response: This is a once a year calculation to move completed projects from construction in progress to fixed assets. As noted in 1 above, for GASB 34 purposes this occurs when the project is complete as to expenditures.

Topic 14: Historical Cost (Survey Question Reference 41): You indicated "AASHO: The First 50 Years" and financial statements as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: The AASHO publication provided actual annual construction expenditures for our highways for the period starting in 1914 continuing to the mid 1960s. We used the current replacement value to allocate AASHO's historical costs among roads, bridges and right-of-way. As noted at 14 and 43 above, we reported actual expenditures in the Department's financial statements for the period starting in the mid 1960s to the early 1990s which together with current expenditure records, allowed us to determine the historical costs of our highways.

Topic 15: Book and Replacement Value (Survey Question Reference 50): Your department reported an overall book value of $9 billion and a replacement value of $42 billion. Please describe how these estimates were calculated.

Response: Book value as reported in the DOT's financial statements was determined using historical costs as described at 41 above. For replacement cost, our engineers determined the cost to reconstruct our systems currently based on average current cost per mile. Replacement cost includes right-of-way (based upon average cost per acre in each county), construction in progress, and the Southern Connector, and the total amount has not been reduced by accumulated depreciation.

Topic 16: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (comparability with other states). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: See our response to 2 above. Infrastructure assets are unique—they are not readily marketable and far outlive other capital assets. In this environment, what is the point of depreciation? The modified approach presents disclosures about how well infrastructure actually is maintained, and it is future oriented. We believe this would be more meaningful information for the readers of financial statements. The risk, of course, is that under the modified approach it is easier for the DOT to look bad compared with other DOTs or budgets. For this reason we would like to see more detailed standards developed for condition assessments and disclosures to minimize the possibility of unfair disclosures caused by inconsistencies.

Topic 17: Condition Targets (Survey Question Reference 44): In response to question #44, you indicated that condition assessments will be used to aid in budgeting & funding requests, strategically allocate dollars and develop long range plans. Do condition targets influence the size of the preservation budget?

Response: We believe that condition assessments provide significant detail that provide (or should provide) support for making budgetary and funding decisions. However, the general practice has been to match whatever Federal-aid is available for capital projects and devote the remainder to maintenance.

Topic 18: Communications (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: The GASB 34 implementation project brought everyone to the table to explore GASB 34 issues. Working together we were able to quickly make more informed decisions and find solutions. Since completion of the GASB 34 implementation project, contacts between the program and finance staff are more frequent.

Topic 19: Resource Allocation (Survey Question Reference 35): However, you indicated no significant improvement in resource allocation within DOT. Could you explain further? Could no improvement be because resource allocation was already good or is it that the GASB 34 implementation process simply resulted in no improvement?

Response: Simply, we believe the depreciation approach has no effect on resource allocation, which was already adequate.

Topic 20: Implementation Costs (Survey Question Reference 12): You provided a $55,000 cost estimate ($5,000 for training and $50,000 additional cost for the audit for GASB 34 implementation). Are these essentially estimated costs of staff time? Do the costs include development of new or modified asset management systems? Please provide as much detail as possible.

Response: We did not track the time and expenses of our staff for the GASB 34 implementation. Roughly, three persons spent about 15% of the time on this project for about 18 months (approximately 2/3 of a person year), so our estimate of $5,000 staff time is low. As noted, we incurred an additional $50,000 in audit costs for additional work needed to verify our infrastructure calculations and to help reformat our departmental financial statements to a GASB 34 presentation.

Other Issues: You indicated that South Carolina is considering a shift from depreciation to the modified approach because the latter more closely matches what really occurs in infrastructure management. However, the department is concerned that a) its asset management system is not yet complete for secondary roads and b) the modified approach will reveal the cost to preserve. Please discuss the process that will be used to reach a decision on this matter.

Response: As noted in 15 above, we are modifying our valuation system for secondary roads. When completed, we will consider what a change in the modified approach will mean to us. We will consider the informational benefits (which we now believe will be useful), the risks of misunderstanding, and the costs of developing the required GASB 34 disclosures.

TENNESSEE

Interview with Neal Ham, Jennifer Herstek, Laurie Clark, Jeff Jones, Wayne Seger, Terry Leatherwood, Edward Wasserman, Gerald Gregory, Donald Reed and Dianne McKay.

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: Implementation generally went well. A key was starting early in mid 1999, just before the final version of GASB 34 was published. This was essentially a DOT effort, but we met early with the auditor and the Department of Finance and Administration to secure buy-in. Key hurdles included collecting and calibrating historical cost data and the establishment of condition targets and related measurements. We recognized that it might be difficult to change condition targets, so we wanted to perfect them. Establishing GASB 34's condition information requirements gave momentum to the ongoing development of management systems, notably the Maintenance Management System (MMS) and the Pavement Management System (PMS).

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that a committee was used to implement the GASB 34 infrastructure requirements. Tell us more about how that worked. Who was on the committee? How many times did it meet? Who chaired the committee? Was it effective in airing all views and building consensus?

Response: A DOT committee with representatives from finance, structures, right-of-way, roadway design, planning and maintenance met quarterly initially, more frequently toward the end. The committee worked well and was chaired by Janice Marston, former Director of Finance. We have not found it necessary to continue the committee for the 2003 CAFR preparation.

Topic 2: Outside Inquiries (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: We have received no inquiries from outside parties concerning the GASB 34 information contained in the 2002 CAFR. However, this information represents just a single data point. After these reports have been prepared for several years and it becomes possible to identify trends using validated data, we would expect there to be increased interest. We have received inquiries from cities and counties seeking assistance in preparing their own reports such as information about their bridges that we inspect.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the modified approach was inconsistent estimated lives and salvage values in the depreciation approach. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: The depreciation approach was viewed as not meeting the spirit of GASB 34 since we have systems for managing infrastructure. It also was viewed as not being informative. The estimated life of infrastructure assets is indefinite, or should be. The Tennessee Road Information Management System (TRIMS) and the bridge management system (PONTIS) provided the key inputs. The missing element was road condition data that is now being supplied by the Maintenance Management System (MMS), but that is still in its infancy—only one year of data is available. As noted at 31 below, the Pavement Management System also has condition data that serve as a quality control check.

Topic 4: Selection of Approach (Survey Question Reference 2): You noted that in selecting the modified approach, you did not seriously consider the alternative. What was the reason for this? Who was primarily involved in the decision (e.g., was it an agency decision or was the decision made at the state government level?) In general, what do you see as the advantages/disadvantages of each approach? Was the potential effect on DOT funding a consideration in your selection? In what way—please explain.

Response: We felt that the numbers generated by the depreciation approach didn't represent anything. There really wasn't a decision as such; it was assumed from the beginning that we would be using the modified approach. We discussed the risk of being forced to convert to depreciation if the targets were not achieved, but did not fear this. If the state had to convert to depreciation, it would find a way to do it at a high level to minimize the effort. The potential effect of the approach selected on funding was not an explicit consideration, but we did think about it a bit.

Topic 5: Perspectives (Survey Question Reference 3 and 34): You noted no significant difference in perspectives among

stakeholders as to which approach (depreciation/modified) to use. This is a different answer than what we expected based upon what we were hearing elsewhere (e.g., finance wants depreciation and engineers want modified). Any thoughts or observations as to what generated the consensus in your state? Or was it decided by a single office without much consultation?

Response: TRIMS and PONTIS made the modified approach easier for us; absent these two systems we may have arrived at a different conclusion.

Topic 6: Challenges (Survey Question Reference 7): Unlike many states, you didn't indicate that the modified approach is more challenging to implement. Please explain your reasoning. How do you see the role of your department's management systems and data in supporting the modified approach?

Response: We believe that the depreciation approach would have been more complicated and less meaningful. We viewed the establishment of a starting date for road segments as a problem in the depreciation approach. We also were concerned about multiple lives for different segments of roadway and how to handle fully depreciated roadway and bridges still in service. At the same time, the modified approach is challenging because you have to determine the condition assessment targets and measurement criteria for which there are no standards and little experience.

Topic 7: Modifications to System (Survey Question Reference 14): You indicated minor modifications were necessary to your financial management systems to comply with GASB 34. Can you describe to us what these modifications were? What GASB requirement or aspect of GASB reporting necessitated these revisions? Did the level of detail change? Were any new data collection efforts needed because of this change? How would you describe the level of effort devoted to these changes: e.g., in person-months.

Response: It was necessary to identify all projects (as noted at 41 below, 4,000–5,000 projects were open at inception) as either capital or maintenance. A column was added to the database and additional reports created. Also, TRIMS needed to be modified to account for retirements from the system, a capability that it did not previously have.

Topic 8: Condition Targets (Survey Question Reference 31): GASB requires that you specify annual targets for condition and planned budget expenditures for infrastructure assets. How has your agency determined these targets? Are the GASB targets consistent with performance targets used in your asset management? Was a financial check done to see if these targets are feasible given planned program budgets?

Response: For bridges, the FHWA National Bridge Index target of 75% of deck area being neither structurally deficient nor functionally obsolete was selected. This was judged to be a more stable and intuitive measure than the alternatives (sufficiency rating or PONTIS health index). For roads, condition targeting was a new venture for TDOT. Achievement of the targets was measured by the Maintenance Rating Index (MRI) generated by the MMS, with the Pavement Management System serving as a quality control check. The MRI works on a pass/no pass basis and the goal is that 75% of the road segments (segment = $^1/_{10}$ mile) meet or exceed the standards. 7% of the segments are sampled every year. The MRI is comprised of five elements—pavement, shoulder, roadside, traffic and drainage. The first year results in 2002 were unexpectedly high (87.75), indicating that further calibration is required.

Currently, there is no link between condition target and expenditures due to the newness of the system. Expenditure targets are now based on the budget; in the future they will be derived from the MMS as that system matures. We acknowledge that budget-based targets introduce a discrepancy in the comparison with actual figures since the budget year and expenditure year do not always align in our encumbrance-based budget system. That discrepancy could be addressed by a purely cash flow system, but that is not current practice. Also, we believe that the comparison between targeted and actual conditions is considerably more important and relevant to the public than the comparison between planned and actual expenditures.

Topic 9: Additions and Retirements (Survey Question Reference 1): Your response regarding the difficulty in accounting for additions to and retirements of infrastructure assets is significant. What caused these difficulties? How did you keep track of these additions and retirements before GASB 34? Are any organizational/procedural changes planned to better account for these events?

Response: As noted in 14 above, it was necessary to modify TRIMS to account for retirements. This was done manually for 2002 and 2003. It is now automated with a report on lane miles removed generated by TRIMS.

Topic 10: Categorization of Costs (Survey Question Reference 27): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: Based on the nature of the construction, a project is categorized as either capital or preservation/maintenance (we combine preservation and maintenance into a single category). A major reconstruction project is categorized

as capital even if the number of lanes remains the same because such projects inevitably include capacity and safety improvements based on current design standards. On the other hand, a resurfacing project might have safety benefits due to the removal of potholes, but it would still be categorized as maintenance. We do not allocate costs within a project to the two categories—that is not practical with over 1,500 new projects a year.

Topic 11: Estimating Costs of Preservation (Survey Question Reference 29): You indicated difficulty in estimating the costs of preservation for purposes of GASB disclosures. What exactly were these difficulties? How did you go about overcoming them? Did your agency apply management systems (e.g., PMS, BMS, MMS) to estimate these costs? Were you concerned about the impact of these disclosures?

Response: The linkage between targeted conditions and required expenditures in our management systems is weak. Neither the MMS nor PONTIS as deployed is currently mature enough to generate reliable estimates. We hope to achieve that capability in MMS, but not in PONTIS. For 2002 and 2003, the estimated costs were projections based upon historical funding patterns.

Topic 12: Asset Classes (Survey Question Reference 28): You indicated three asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: DOT utilized roads, bridges and right-of-way as our three asset classes. The division between roads and bridges was due to different condition rating systems. We gave some thought to a single infrastructure class, but decided against it. Roads and bridges were rolled up into infrastructure in the CAFR for the balance sheet, but the road and the bridge categories were needed for MD&A and RSI purposes, as well as audit and control purposes. We do not anticipate changing the number of classes in the future.

Topic 13: Asset Threshold (Survey Question Reference 39): You reported that no capitalization thresholds were used to determine whether assets were significant enough to report. Are unofficial "rules of thumb" employed?

Response: A project-by-project determination regarding capitalization is made based upon the nature of the construction, with no "rule of thumb." Even a very small project might be capitalized if warranted.

Topic 14: Capitalization (Survey Question Reference 38): You indicated that project costs are capitalized upon approval of construction. Please describe how the DOT defines capitalization.

Response: For construction, costs are accumulated as construction-in-progress; capitalization is triggered by a completion notice that accepts the project. For the most part this is the same time as "open to traffic," although not always. Transfer of costs to capital is made once a year for all projects with this completion notice. Right-of-way costs are transferred once a year in the year of acquisition.

Topic 15: Historical Cost (Survey Question Reference 41): You indicated "AASHO: The First 50 Years" and financial statements as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: We had three tiers of historical cost information:

- The AASHO report for 1914 to 1964, with annual construction costs allocated among roads, bridges and right-of-way based upon current replacement cost.
- High level appropriation codes for 1964 to 2001 costs.
- Project level information on costs beginning in 2001, may be allocated between roads and bridges (4,000–5,000 open projects).

Topic 16: Book and Replacement Value (Survey Question Reference 50): Your department reported an overall book value of $15 billion and a replacement value of $45 billion. Please describe how these estimates were calculated.

Response: Book value is the historical cost as described in 41 above. Replacement value was derived from statewide average unit costs for lane miles and acres. For bridges, a formula (a step more sophisticated than a per-square-foot of bridge deck estimate) produced an estimate of the cost to replace all of the Department's bridges.

Topic 17: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (useful in preparing budgeting & funding requests and in strategically allocating resources). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: The usefulness of the information is more potential than realized at this point. However, this was the first year of implementation. Over time as the accuracy of the information improves and as a time series of validated data becomes available and trends can be observed, these benefits may be realized and the general level of interest may increase.

Topic 18: Condition Targets (Survey Question Reference 44): In response to question #44, you indicated that condition assessments will be used in budgeting & funding requests and in strategically allocating dollars. Do condition targets influence the size of the preservation budget?

Response: The condition assessments will be used in the indicated manner in the future as the systems become more mature; they are not today.

Topic 19: Communications (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: The implementation process provided a better insight into how others work and what their priorities are. This improved understanding has carried over into other activities.

Topic 20: Resource Allocation (Survey Question Reference 35): However, you indicated no significant improvement in resource allocation within DOT. Could you explain further? Could no improvement be because resource allocation was already good or is it that the GASB 34 implementation process simply resulted in no improvement?

Response: Hopefully, that will occur in the future, but, as discussed above, our systems are not sufficiently mature to achieve improved resource allocation today.

Topic 21: Implementation Costs (Survey Question Reference 12): You didn't provide an estimate of costs or staff time associated with GASB 34 implementation. Has there been an increase in time and cost of the financial audit as a result of GASB 34? Please provide as much detail as possible.

Response: The most time-consuming activity for finance was the classification of all open projects into capital or maintenance. That required 25% of eight accountants' time for a month. Overall, the staff effort was perhaps 1,000 hours for finance, 200 for structures. Maintenance devoted approximately one man year to the effort, but most of that would have occurred anyway; only about 5% was due to GASB 34.

TEXAS

Interview with Duane Sullivan, Robert Snipes, Marios Parpounous, Deborah Weyer, John Munoz, Ralph Banks, Sammy Mitchell and Joe Graff.

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: Implementation was a challenge, but generally everything went well. The way we approached the GASB 34 infrastructure requirements was the best possible approach for the state to implement the requirements for reasons that will be discussed further below. Much of the data needed for GASB 34 infrastructure requirements had to be extracted from our existing systems (principally the Maintenance Management System and BRINSAP for bridges) and re-formatted for GASB 34 purposes. Many Access databases, which have not been linked to our asset systems, were developed for this purpose. The DOT had been conducting highway condition assessments for several years, which made transition to the modified approach relatively smooth. We are generally satisfied with the results, although we have not yet realized significant benefits. TxDOT is becoming a performance-based organization, and GASB 34 will support that trend by enhancing the role of performance measures in financial statements. We expect clarifications, but not significant changes, for the next cycle.

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that GASB 34 was implemented through a collaboration of the DOT, Comptroller and State Auditor. Tell us more about how that worked. How many times did you meet? Who chaired the group? Was it effective in airing all views and building consensus?

Response: The Comptroller's office led the state's overall GASB 34 implementation committee, which consisted of several smaller committees representing many state agencies, including a Capital Asset team in which DOT participated. The committees met for about a year and a half (starting early was key to success) and one important output was a Capital Asset Guide on GASB 34. The Guide includes new capitalization and depreciation criteria, detailed definitions of various asset categories and accounting transaction guidance. The Guide can be obtained on the internet at: http://www.window.state.tx.us/comptrol/san/publications/pubalpha.html.

In addition, there was a committee within TxDOT that met through this period.

Topic 2: Outside Inquiries (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: We have noted very little interest in the GASB 34 infrastructure CAFR data. Most legislators are not even aware of the data. We are disappointed there has been so little inquiry after all of our effort. For example our 2002 CAFR shows an increase in maintenance expenditures for interstate highways, as compared with the estimate, but a reduction in the overall condition assessment. No one questioned this disparity.

There is one exception to our comments. We maintain bridge inventories for local governments (which are not part of the state system) and we perform condition assessments on those assets. Local governments have made numerous inquiries about those records, apparently with regard to their own implementation of GASB 34.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the depreciation approach for selected assets was the availability of information and the ability to separately identify assets. However, you selected modified as your basic approach because of more useful information. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: With respect to fixed asset subject to depreciation, the state's central property management system was generally used for GASB 34 purposes, with certain exceptions, including bridges. This was because the bridge system included a good inventory from which to make depreciation calculations. The bridge system does not include asset management functions, which, by GASB definition, precluded use of the modified approach for that class of infrastructure. The state has not been in a position to implement such a system. For highways, the DOT had the asset management system needed for the modified approach and it has been working very well. Another factor was that we believe that bridges have a more definable life cycle than roadways and thus lend themselves more readily to a depreciation calculation. We believe use of the modified approach

for roadways was therefore most appropriate from both information gathering and reporting perspectives. We might consider a shift to the modified approach for bridges if we implement a bridge management system that would generate the necessary information.

Topic 4: Perspectives (Survey Question Reference 3 and 34): You noted no significant difference in perspectives among stakeholders as to which approach (depreciation/modified) to use. This is a different answer than what we expected based upon what we were hearing elsewhere (e.g., finance wants depreciation and engineers want modified). Any thoughts or observations as to what generated the consensus in your state? Or was it decided by a single office without much consultation?

Response: There was general agreement between the perspectives of all stakeholders, based primarily on the nature of the systems we used. See our response to questions 15a and 25a above. There was some concern about how the information would be used, but that didn't influence the decision on approach.

Topic 5: Challenges (Survey Question Reference 7): You indicated that the modified approach is more challenging to implement. Please explain your reasoning. How do you see the role of your department's management systems and data in supporting the modified approach?

Response: The difficulty of approach depends on the asset system used by the DOT. Notwithstanding this fact, our highway and bridge asset systems contain most of the data in formats that differ from those required by GASB 34. The re-formatting involves the use of Access databases and Excel spreadsheets, the extent of which initially seemed greater for the modified approach than for the depreciation approach. This is because for the modified approach there are more factors to consider than the life, salvage value and depreciation calculation considerations for the depreciation approach. However, we now believe that if the state had to switch to the depreciation approach because it did not achieve the required condition targets, computing depreciation might be a nightmare. This is because of the high level at which highway data now is accumulated. Lower levels of accumulation would likely be necessary for depreciation purposes. For example, new roadway may have different sections that require differing depreciation calculations because the sections have differing estimated lives. In summary, the real answer to question #7 is "that depends."

Topic 6: Modifications to System (Survey Question Reference 14 and 43): You indicated that both minor and major modifications were necessary to your financial and asset management systems to comply with GASB 34, including development of new accounts to track types of expenditures and creation of inventories in an Access database. Was this the extent of the modifications? What GASB requirement or aspect of GASB reporting necessitated these revisions? Did the level of detail change? Were any new data collection efforts needed because of this change? How would you describe the level of effort devoted to these changes: e.g., in person-months?

Response: Again, we had to re-format our information for GASB 34 purposes. Our highway data is on a project basis, which we had to convert to an asset by year of construction basis for GASB 34 purposes. Our bridge data is on an asset by year of construction basis but we had to amplify it with cost data. It was necessary to allocate expenses among capital, preservation and maintenance categories and to compute the value of the assets. We used Access databases and Excel spreadsheets for these purposes (the exercise would have been very difficult without these tools). This required 20% of three or four staff members' time for 1½ years.

Topic 7: Condition Targets (Survey Question Reference 31): GASB requires that you specify annual targets for condition and planned budget expenditures for infrastructure assets. How has your agency determined these targets? Are the GASB targets consistent with performance targets used in your asset management? Was a financial check done to see if these targets are feasible given planned program budgets?

Response: The DOT's development of targets started well before the implementation of GASB 34 and is a continuing effort based upon historical expenditures and condition levels. A condition assessment system for roadways was implemented the previous year and was used, without modification, for GASB 34. It's based on a sample size of 5% for highways and 10% for Interstates with 1–5 scoring. Scoring is aggregated by district, by highway type and by asset type. The Commissioners approve the targets, in a formal process. The targets are fiscally constrained. The most difficult aspect of the exercise is the weak correlation between expenditures and outcomes—this will require further development over the next few years. However, we believe that the comparison between targeted and actual condition levels, as opposed to the comparison between planned and actual expenditures, is the more meaningful aspect of the exercise.

Topic 8: Additions and Retirements (Survey Question Reference 1): Unlike many states, Texas did not indicate difficulty in accounting for additions to and retirements of infrastructure assets. How did you keep track of these additions and retirements? Was this the same process as used before GASB 34?

Response: We have always kept track of additions and deletions in our highway and bridge systems. With the implementation of GASB 34 we now annually enter the amounts into the state's accounting system for both construction in progress and fixed asset classes. The threshold for an addition is when 85% of anticipated expenditures have occurred.

Topic 9: Categorization of Costs (Survey Question Reference 17 and 27): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: The Capital Asset Guide discussed in question 32 above provides the specifics of the elements of capital asset costs. As a practical matter we consider the complete reconstruction of a roadway and overlay of existing lanes located next to newly constructed lanes all to be capital costs. We do not attempt to separate such projects between their maintenance and capital components because the effort would be extensive and cost prohibitive. (Note: the preceding represents DOT's perspective. The State Comptroller's Office and the State Auditor's Office both indicated that this subject warranted further consideration and perhaps a more sophisticated approach.)

Topic 10: Estimating Costs of Preservation (Survey Question Reference 29): You indicated difficulty in estimating the costs of preservation for purposes of GASB disclosures. What exactly were these difficulties? How did you go about overcoming them? Did your agency apply management systems (e.g., PMS, BMS, MMS) to estimate these costs? Were you concerned about the impact of these disclosures?

Response: Our estimates of the costs of maintenance and preservation have to be determined independently of budgeted amounts. The budgetary system may reflect certain maintenance costs as construction (capital) simply because of differences in definitions. We use Access databases and Excel spreadsheets to make these estimates. We believe that for internal control purposes a reconciliation of the amounts we estimate to budgetary amounts should periodically be prepared. Bridges—we believe we would be able to readily determine preservation and maintenance costs if we were to switch to the modified approach.

Topic 11: Asset Classes (Survey Question Reference 18 and 28): You indicated five asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: The classes of assets were determined by the state's Capital Asset Team discussed in question 32 above. We do not expect the asset classes to vary in the near future.

Topic 12: Asset Threshold (Survey Question Reference 39): You reported asset thresholds of $500K for infrastructure, $5K for personal property and $100K for other real property. Do these limits work well for Texas?

Response: The capitalization thresholds were determined by the state's Capital Asset Team discussed in 32 above. We believe these thresholds work well for our DOT.

Topic 13: Estimating Asset Lives (Survey Question Reference 20): You indicated you used comparison with lives used by others to estimate asset lives. Could you expand on that with specific examples?

Response: The bridge division arrived at lives that were different (longer) than those lives actually used to compute depreciation in the CAFR, so our response is moot. The State Comptroller used the American Appraisal Association to estimate lives for classification of assets and these were used for purposes of computing depreciation in the financial statements.

Topic 14: Capitalization (Survey Question Reference 38): You indicated that project costs are capitalized at the time of 85% project completion. Please describe how the DOT defines capitalization.

Response: It is not always practical for us to determine "substantial completion" of a project. For example, when is a two-part project that includes new lanes as well as asphalt over existing lanes substantially complete? Further, as noted in question 17/27 above, it is not always practical to separate capital and maintenance costs so we consider all of these costs to be capital. Thus, the 85% factor was designed to approximate the time of "substantial completion" by allowing for the lag time in final payments to contractors after completion. The policy in the Capital Asset Guide provides that costs are capitalized (i.e., moved from construction in progress to infrastructure) at the earlier of substantial completion of the project or when 85% of the anticipated expenditures have been made to the contractor. As a practical matter, the DOT only uses the 85% measurement.

Topic 15: Historical Costs (Survey Question Reference 41): You indicated "AASHO: The First 50 Years" and financial statements as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: Highways: We developed the historical cost of the highways through a combination of AASHO figures ("AASHO: The First 50 Years") and TxDOT's past financial reports. Since reported "construction" expenditures

include types of construction that would not be capitalized under GASB 34, we looked at the composition of these expenditures over a 10 year period, 1991 through 2000, and derived a factor which we could apply to total construction expenditures to arrive at what should be capitalized. This factor was applied to the total "construction" costs according to AASHO figures and TxDOT's past financial statements.

Bridges: When determining historical bridge costs, we used the current year replacement cost ($/ft^2 × deck area) for each category of bridge and indexed the cost back to each bridge's year of construction.

Topic 16: Book and Replacement Value (Survey Question Reference 50 and 51): Your department reported an overall book value of $33 billion (+12.9 for bridges) and a replacement value of $225 billion (+21.8 for bridges). Please describe how these estimates were calculated.

Response: These estimated values excluded assets reported under the depreciation approach (principally bridges). Adding bridges, the overall book value is $46 billion and the replacement value is $247 billion. For bridges we used year 2000 per square foot costs applied against inventory to arrive at replacement costs. For bridge historical costs we applied FHWA factors to deflate the replacement costs to historical costs. For current replacement costs for roadways, we used our current number of lane miles for each road type (freeway, non-freeway, etc.) and multiplied it by the current estimated construction costs per lane mile for each road type.

Topic 17: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (useful in preparing budgets & funding requests, strategically allocating resources and making the case for funding infrastructure). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: Actually, we believe these are potential uses that have not yet been realized.

Topic 18: Condition Targets (Survey Question Reference 44): In response to question #44, you indicated that condition assessments will be used to aid in budgeting & funding requests and strategically allocating dollars. Do condition targets influence the size of the preservation budget?

Response: There had been a seven year decline in pavement condition scores, but now the 'fix it first' philosophy is taking hold with a 60% increase in funding from FY1997 to FY2002. Thus, the use of condition assessments is influencing the budget process. However, this shift in priorities was in effect prior to GASB 34.

Topic 19: Communication (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: Very simply, we believe that the GASB 34 project forced the different offices to work more closely, resulting in joint efforts to find better solutions. For example, the relative weightings of the various asset types in the maintenance management system were revised to place a more appropriate (greater) emphasis on pavements at the suggestion of the State Auditor's Office.

Topic 20: Resource Allocation (Survey Question Reference 35): You indicated significant improvement in resource allocation within DOT. Could you describe further?

Response: The question we responded to relates to the future. We believe that the improvements in the lines of communications discussed at question 35 will improve how dollars are allocated in the future because such allocations will be based on more informed decisions.

Topic 21: Implementation Costs (Survey Question Reference 12): Let's talk about the GASB implementation costs. You indicated $239,000 and 6,200 staff hours. Do these costs include only staff time needed to develop the required GASB reports? Does this staff time include managerial staff only, or IT/data or other staff as well? Do the costs include development of new or modified asset management systems? What has been the increase in time and cost of the financial audit as a result of GASB 34? Please provide as much detail as possible.

Response: These are the costs to prepare the GASB 34 documents only, excluding system costs and other IT support. With respect to the audit, there was increased time in FY 2002 due to initial implementation. We expect this will decline in the future.

VERMONT

Interview with Mike Pollica, Phil Cross, Mike Aswell, Bob Shadduck and Renee Lehart. August 20, 2003

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: The implementation of the infrastructure provisions of GASB 34 went very well. The state government has not yet issued the 2002 CAFR due to the implementation of a new accounting system. From the Agency of Transportation (AOT) perspective the GASB 34 implementation took a lot of time because we had to create a new infrastructure database from two sources—a) 1980–1993 project cost ledgers that existed before our current STARS project cost system and b) 1994–2001 data from our STARS system. This process is further discussed at 41 below. The implementation was made more difficult because we did not report general fixed assets as an account group in the state's pre-GASB 34 CAFR. If we had this implementation to do over, we probably would have hired a consultant given the small size of our staff.

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that a committee was used to implement the GASB 34 infrastructure requirements. Tell us more about how that worked. Who was on the committee? How many times did it meet? Who chaired the committee? Was it effective in airing all views and building consensus?

Response: Our AOT steering committee consisted of two directors—the Director of Administration and the Director of Program Development. There was no state-wide GASB 34 implementation committee. We worked directly with State Finance & Management to obtain approval of our planned approach. We also notified the State Auditor. All decisions pertaining to infrastructure were made by our steering committee with final approval of State Finance & Management. Options for meeting GASB 34 requirements were presented to the steering committee, which selected the depreciation approach and launched the effort. An AOT working committee then carried out the work. We attended industry meetings such as the AASHTO-sponsored conference held in Nashville in 2001.

Topic 2: Outside Inquiries (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: Since the state government has not yet issued the 2002 CAFR under GASB 34, we have not received any inquiries on the new information presented in the financials. We believe that the decline in asset balances resulting from depreciation may raise questions in the future for the AOT. For reasons discussed below we believe this would be a positive outcome.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the depreciation approach was inadequate asset management systems. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: GASB is primarily concerned about financial and accounting issues, and the AOT is primarily concerned about asset management issues. Depreciation is an accounting concept for allocating the costs of capital assets, but it does not address asset condition. MD&A and RSI are good places to present asset management data with possible comparisons with accounting data. An example of such a comparison might be presenting a schedule showing whether preservation spending is keeping up with depreciation. While we believe our asset management system is adequate for our purposes, it does not meet the specific requirements of GASB 34 to allow us to use the modified approach. We are not concerned that our asset management data will not be accounted for under the GASB 34 umbrella (modified approach) as long as the MD&A includes discussion of asset management where it is a major factor contributing to reported financial statement data. We were concerned about the punitive effect of having to change to the depreciation approach if we did not meet our condition targets. We felt comfortable letting accounting do its thing (depreciation) while the Agency focused on managing infrastructure assets.

In a nutshell, we believe that more disclosure makes for a better future regardless how it is presented.

Topic 4: Selection of Approach (Survey Question Reference 2): You noted that in selecting the depreciation approach, you did give serious consideration to the alternative. Who was

primarily involved in the decision (e.g., was it an agency decision or was the decision made at the state government level?)? In general, what do you see as the advantages/disadvantages of each approach? Was the potential effect on DOT funding a consideration in your selection? In what way—please explain.

Response: See comments in 15a above. While potential effects on funding were considered in the GASB 34 method selection purposes, the key selection consideration was how good the information is that is being used by the legislature for funding decisions. We came to the conclusion that the type of information needed by the legislature comes from our asset management system. We believe asset management data is more important because, unlike depreciation, it is future oriented. Integration of this data with the financial statements, while nice, was not the guiding factor in method selection. Depreciation might help make a case for additional funding if it exceeds spending levels, thus leading to a declining asset value.

Topic 5: Perspectives (Survey Question Reference 3 and 34): You noted no significant difference in perspectives among stakeholders as to which approach (depreciation/modified) to use. This is a different answer than what we expected based upon what we were hearing elsewhere (e.g., finance wants depreciation and engineers want modified). Any thoughts or observations as to what generated the consensus in your state? Or was it decided by a single office without much consultation?

Response: Vermont is a small state. All infrastructure GASB 34 deliberations occurred within the AOT among no more than four people. Thus, there was not much debate on the issues.

Topic 6: Challenges (Survey Question Reference 7): You indicated that the modified approach is more challenging to implement. Please explain your reasoning. How do you see the role of your department's management systems and data in supporting the modified approach?

Response: Under the modified approach we would have been dealing with more databases, people and interfaces to develop and obtain the required data and disclosures required by GASB 34. Under the depreciation approach we basically dealt with one database and fewer people and functions because less new information (lives, salvage value, computed depreciation) was required. While we had to retrofit our current system for GASB 34, this process was separate and apart from and did not affect our continuing asset management program.

Topic 7: Modification to Systems (Survey Question Reference 14): You indicated minor modifications were necessary to your financial management systems to comply with GASB 34. Can you describe to us what these modifications were? What GASB requirement or aspect of GASB reporting necessitated these revisions? Did the level of detail change? Were any new data collection efforts needed because of this change? How would you describe the level of effort devoted to these changes: e.g., in person-months?

Response: We did not track hours for the GASB 34 modifications. An educated guess would be we spent about 2,000 hours for the modifications. We had to determine estimated lives, which information basically came from our engineers. We had to break down project costs from the cumulative amounts recorded in our STARS system and prior project cost ledgers into asset classes. For this purposes we calculated weighted average costs and applied them to physical asset classes. Forms were used by our engineers to develop this data.

Topic 8: Additions and Retirements (Survey Question Reference 1): Your response regarding the difficulty in accounting for additions to and retirements of infrastructure assets is significant. What caused these difficulties? How did you keep track of these additions and retirements before GASB 34? Are any organizational/procedural changes planned to better account for these events?

Response: The additions and deletions by asset class had to be identified by the engineers on the forms discussed at 14 above. We did not have this data prior to the implementation of GASB 34. The form indicated whether the project costs by asset class were for new or replacement infrastructure. So far, for GASB 34 purposes we have not experienced a project that included both new and replacement costs. If we should experience such a project, we would probably apply a percentage to the project to determine what is new versus replacement (i.e., what is capital versus maintenance).

Topic 9: Categorization of Costs (Survey Question Reference 17): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: As our response to the written questionnaire indicates, we followed the GASB criteria without exception. This characterization had no impact on our decision to use the depreciation approach.

Topic 10: Asset Classes (Survey Question Reference 18): You indicated five asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: We actually have 15 classes of infrastructure assets representing functional categories in the STARS system. The 2002 CAFR, when published, will roll this up to one asset class for infrastructure.

Topic 11: Asset Threshold (Survey Question Reference 39): You reported that a capitalization threshold of over $25K to $75K was used to determine whether assets were significant enough to report. Were different thresholds applied to different asset classes?

Response: For all classes of infrastructure assets we use a capitalization threshold of $50k with an estimated life of three years or more.

Topic 12: Asset Lives (Survey Question Reference 20): You indicated you used outside appraisers and engineers to estimate asset lives. Could you expand on that with specific examples?

Response: Outside appraisers were NOT used for the GASB 34 implementation. We used only agency engineers. Since we have only 70–80 projects per year, the agency engineers estimated the lives of assets produced by each project using general industry guidelines from AASHTO and their own experience. Typical asset lives for infrastructure range from 45 to 70 years.

Topic 13: Capitalization (Survey Question Reference 38): You indicated that project costs are accrued and capitalized each year. Please describe how the DOT defines capitalization.

Response: All project costs are initially expensed. We then make monthly entries to record the costs in "construction in progress." We move the costs from "construction in progress" to the various asset classes for each individual project at the time of project completion, as evidenced by a "project acceptance memorandum" (approximately 40–50 projects per year) This memorandum indicates when final acceptance has been received by FHWA, the agency, and the chief engineer. At acceptance there still could be future payments and legal settlements to be completed, which could amount to as much as 10%–20% of total project costs. These additional costs are subsequently captured.

Topic 14: Historical Costs (Survey Question Reference 41): You indicated the department's project cost system as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: For the period 1980–1993 we used data from our previous project ledger and for the period 1994–2001 we used data from the detailed object codes in our current STARS project cost system. Some maintenance activities had to be eliminated from these costs and we had to massage the data from their project perspectives to arrive at asset classes. Previously, the 1980–1993 period data had been summarized only by preliminary, ROW, and construction costs "phases." The 1994–2001 period data had been summarized at a detailed object cost level, making the conversion to asset class costs somewhat easier.

Topic 15: Book and Replacement Value (Survey Question Reference 50): Your department reported an overall book value of $760 million. Please describe how this estimate was calculated.

Response: See Topic 14 above.

Topic 16: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (useful in preparing budgeting and funding requests, developing long range plans and making the case for infrastructure funding). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: See our prior comments at 15a and 2 above. The GASB 34 modified approach information would be useful for showing trends and effort, which is helpful in preparing budgeting and funding requests, developing long range plans, and making the case for infrastructure funding. Some of this type of supporting information might be developed under the depreciation approach from MD&A. There is a risk in relying upon any single measure.

Topic 17: Communications (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: This is significant. Before the GASB 34 implementation effort, engineering and accounting personnel within AOT seldom communicated. GASB 34 caused more interaction between these groups to develop GASB 34 information that was not readily available in STARS. These two groups continue the increased interaction as a result of getting to know each other's objectives better.

Topic 18: Resource Allocation (Survey Question Reference 35): You indicated significant improvement in resource allocation within DOT. Could you describe further?

Response: More in depth discussions about resource allocation issues have developed as a result of the improved communications discussed at 35 above. These kinds of discussions rarely occurred before the GASB 34 implementation.

Topic 19: Implementation Costs (Survey Question Reference 12): You didn't provide an estimate of costs or staff time associated with GASB 34 implementation. Has there been an increase in time and cost of the financial audit as a result of GASB 34? Please provide as much detail as possible.

Response: As noted at 14 above, we incurred about 2,000 hours of work to modify our systems for GASB 34 infrastructure requirements. We created a new full time position and that person spends about half time maintaining the systems modifications made by GASB 34. Due to our limited staff resources, we needed this additional position in order to comply with GASB 34 requirements in a timely manner.

WASHINGTON

Interview with Marcy Yates, Greg Lippincott, Aaron Butters, Mark Finch, Charles Fletcher, Lou Baker, Siva Sivaneswaran, Linda Pierce, DeWayne Wilson, Wendy Jarrett. July 29, 2003

General Question to Key Stakeholders: Could you give us your perspective as to how the implementation of the GASB 34 infrastructure reporting went in your state? What were the major hurdles? How were they resolved? Are you satisfied with the results? How has the implementation of GASB 34 affected budgeting or decision making in your state? What would you have done differently? What do you plan to do differently for the next cycle and submission?

Response: The GASB 34 Infrastructure implementation project was a different experience for all of us from the perspective of the interaction of asset management, accounting and finance personnel. We believe it went smoothly and we will not significantly change our approach in the next cycle. Many different sources of information (sometimes conflicting), particularly for lane miles, additions and deletions, and historical costs, increased the requirement for coordination among all state personnel. We tried for GASB 34 consistency with our ongoing program of reporting performance measures to the public and the legislature. There was minimal effect on budget decision making since WSDOT already practiced asset management, particularly in the areas of pavements and bridges. This project did cause us to look at our responsibilities not only from a physical accounting and reporting perspective, but also from a costing perspective (bridges) and to do additional work on inventories. Handling additions was a challenge—our improvement type codes were not always fully descriptive; we needed to restructure to make division between capital and preservation/maintenance clear.

Topic 1: Committee Efforts (Survey Question Reference 32): You indicated that a committee was used to implement the GASB 34 infrastructure requirements. Tell us more about how that worked. Who was on the committee? How many times did it meet? Who chaired the committee? Was it effective in airing all views and building consensus?

Response: The Department's Executive Board (consisting of high level program personnel, divisional directors, regional administrators, assistant secretaries, etc.) set the initial direction and we then used several informal committees throughout the GASB 34 infrastructure implementation project, mostly on an ad hoc basis. This included an executive committee that was primarily informational, a work committee consisting of Marcy Yates and Jodie Stanton (see titles below following table) that executed the detail (further comments at question 12 below), and a committee from the Office of Financial Management (OFM) that was established mostly for quarterly informational purposes. In the end, a committee of two, Assistant Secretary John Conrad and Don Nelson, Director of Environmental and Engineering Programs, made the final DOT decisions pertaining to GASB 34 infrastructure requirements. We met quarterly with OFM officials and they generally agreed with DOT decisions. From the beginning there was little disagreement among all DOT and state finance parties. OFM—While OFM participated in preliminary planning and NASACT conference calls, it felt comfortable with DOT's knowledge of the GASB's requirements. Also, in consideration of the expected close auditor review of this DOT project (largest state asset), OFM let the DOT run the show. There was never any disagreement about the decision to use the modified approach. Everyone felt that this approach was the best way to collect and present relevant state data.

Topic 2: Outside Inquires (Survey Question Reference 6): To elaborate further on Question #6, has the DOT received any inquiries or questions from the public, legislature, or other interested parties regarding the new information presented in its financials? If so, who requested the information and what kind of information/clarification were they requesting? Has the DOT received any feedback from outside parties regarding the DOT's use of depreciation or the modified approach in reporting infrastructure?

Response: Only one legislator made some inquires, mostly from the perspective of future planning requirements as opposed to the detail of the infrastructure data. The Department of Revenue made inquiries pertaining to the valuation of infrastructure in an attempt to determine the value of lost property taxes to local jurisdictions. Some methodology inquiries have been made by local jurisdictions related to their concerns over the value of jurisdictional swaps of roadway. And of course there was significant auditor interest in and testing of infrastructure information, for example contract records to make sure that the inventory of lane miles was up to date and included all relevant costs. See further comments at question 44 below.

Topic 3: Basic Decisions (Survey Question Reference 25): You indicated that the paramount factor in your agency's decision to select the modified approach was more useful information. Please elaborate further. What key premises or assumptions did you feel should be reflected in GASB reporting? How do you see the role of your agency's management systems and data resources in supporting GASB?

Response: We already had a good asset management system in place and the modified approach follows the same basic asset management requirements. The state did not want to use a different methodology for GASB 34 purposes. We relied heavily upon existing pavement management

and bridge management systems; without those in place we might have considered the depreciation approach. OFM was happy to leave all DOT GASB 34 infrastructure reporting decisions to the DOT. Also, see comments at 32 above.

Topic 4: Selection of Approach (Survey Question Reference 2): You noted that in selecting the modified approach, you did not seriously consider the alternative. What was the reason for this? Who was primarily involved in the decision (e.g., was it an agency decision or was the decision made at the state government level?) In general, what do you see as the advantages/disadvantages of each approach? Was the potential effect on DOT funding a consideration in your selection? In what way—please explain.

Response: See previous comments at question 25a and 32. While we have not discussed advantages and disadvantages of the depreciation approach, we perceive no advantage to such an approach as it is a mathematical exercise, unrelated to the way we manage infrastructure assets. The staff recommendation to use the modified approach was accepted by the Executive Board with little discussion. The potential effect of funding was not a consideration in our decision to use the modified approach. Of course, we hope that the information will positively affect future legislative infrastructure funding decisions and that even more attention will be paid to the state's infrastructure needs, but that effect is more potential than real at this point.

Topic 5: Perspectives (Survey Question Reference 3 and 34): You noted no significant difference in perspectives among stakeholders as to which approach (depreciation/modified) to use. This is a different answer than what we expected based upon what we were hearing elsewhere (e.g., finance wants depreciation and engineers want modified). Any thoughts or observations as to what generated the consensus in your state? Or was it decided by a single office without much consultation?

Response: Our state is preservation oriented, as reflected in our existing asset management system. The use of the depreciation approach would have required the creation of yet another new methodology, primarily extensive spreadsheets or a modification of our system, to track lives, salvage values and depreciation expense. Again, this information seems unrelated to our asset management approach. Using our existing management systems to obtain data for the requirements of the modified approach of GASB 34 seemed to be more logical.

Topic 6: Challenges (Survey Question Reference 7): You indicated that the modified approach is more challenging to implement. Please explain your reasoning. How do you see the role of your department's management systems and data in supporting the modified approach?

Response: See our response to questions 3 and 34 in the preceding paragraph. The most difficult aspect of this approach was for us to identify additions and deletions of infrastructure for GASB 34 reporting purposes. Our accounting system was not set up for us to easily do this. In the end we used DOT improvement codes for this purposes, but these required some further analysis. Using a depreciation approach would have required us to start from scratch. Notwithstanding our response to question 14 below, we believe the depreciation approach could have been more difficult because it would have required additional information that is unrelated to our asset management system (lives, salvage value, depreciation). Pavement Management section—the key challenge was getting the finance group to understand the Pavement Management system and what it does.

Topic 7: Modifications to Systems (Survey Question Reference 14 and 43): You indicated minor modifications were necessary to your financial management systems to comply with GASB 34. Can you describe to us what these modifications were? What GASB requirement or aspect of GASB reporting necessitated these revisions? Did the level of detail change? Were any new data collection efforts needed because of this change? How would you describe the level of effort devoted to these changes: e.g., in person-months?

Response: We had to develop much ad hoc reporting from our existing asset management system to accommodate the requirements of GASB 34. We developed spreadsheets for the different data, such as additions to and retirements of infrastructure assets. We had to re-label transactions to fit the requirements of GASB 34 reporting. In short, we had the data; we just had to re-package it to make it understandable. See our response to question 1 below regarding linkage of our system with the financial statements. See our response to question 12 below regarding level of effort devoted to these changes. See our response to question 41 below regarding examples of ad hoc reporting.

Topic 8: Condition Targets (Survey Question Reference 31): GASB requires that you specify annual targets for condition and planned budget expenditures for infrastructure assets. How has your agency determined these targets? Are the GASB targets consistent with performance targets used in your asset management? Was a financial check done to see if these targets are feasible given planned program budgets?

Response: The Transportation Commission presents funding recommendations that are derived from assets that are due and past due for preservation work. The actions of legislators as reflected in budget allocations and appropriations, hopefully in accord with the recommendations, determine the targets. In other words, we take the budgeted amounts and translate them into condition targets. This

process involves the additional consideration of needs, priority and accident data. In 2001, this process yielded a target of 91% of pavements in fair or better condition. (However, even if funding wasn't a constraint the target wouldn't rise above, say, 97% due to poor condition in short segments that are uneconomic to address). Our methodology was developed years ago and basically tries to identify the lowest life cycle cost. Preservation requirements for pavements are derived from an index (Pavement Structural Condition) comprised of cracking (10% or more with medium severity alligator cracking), rutting (10-mm maximum to avoid ponding and hydroplaning) and ride quality (International Roughness Index). The lowest criterion determines the index ranking, and in 90% of the cases that is cracking since this is an aggressive target, calling for earlier interventions than in most states. Yes, a financial check was performed—that, in fact, governs the allocation. This is a fiscally constrained procedure, rather than a 20-year plan.

Topic 9: Additions and Retirements (Survey Question Reference 1): Your response regarding the difficulty in accounting for additions to and retirements of infrastructure assets is significant. What caused these difficulties? How did you keep track of these additions and retirements before GASB 34? Are any organizational/procedural changes planned to better account for these events?

Response: Before the adoption of GASB 34 there was no need to link asset management data with the financial statements. Our records reported asset information and cost data was not classified by asset. As noted in our response to question 14 above, we had to develop ad hoc reporting to link the information from our asset management system with the financial statements. In the future we anticipate automating this linkage when funding or programming resources become available. OFM—like all other departments, DOT is required to complete disclosure forms to classify information from its systems to the GASB 34 requirements. While OFM is unable to comment on the DOT responses to questions 14 and 1, it understood that the DOT had to do much more "tweaking" of its data than other state departments. This was probably because DOT records are maintained on a project basis and accordingly are not linked to or part of the statewide accounting system.

Topic 10: Categorization of Costs (Survey Question Reference 27): How does your agency characterize the costs included in Capital, Preservation and Maintenance categories? How do you see this distribution relating to the cost categories described in GASB Statement 34 for your department's selected approach?

Response: We have considerable difficulty with the way GASB has combined the terms maintenance and preservation. We have a preservation program which, is a capital program, separate from our maintenance program, which is an operating program. Consequently, we do quite a bit of analysis of the activities in our preservation program to determine if they increase capacity or improve efficiency. We do not believe one can be as explicit on this characterization as the GASB suggests. For example, consider the complete reconstruction of a roadway that increases life but does not result in readily identifiable increases in the capacity or efficiency of the roadway (improvements). For asset management purposes, we consider this to be a new asset that should be capitalized. The reconstruction inevitably results in improvements reflecting current standards (for example, improved pavement design and consequent increase in load carrying capacity) even though we have not specified what those improvements are. Identification of that portion of the expenditures that represent improvements versus preservation, as suggested by question/answer 59 of GASB's first GASB 34 implementation guide, is impractical considering the hundreds of new projects each year. Further, OFM has suggested that the dollar amount of preservation costs capitalized would be immaterial from an overall financial statement perspective. For efficiency purposes, we capitalize all infrastructure system expenditures over $100,000 in the financial statements. Most important, we coordinate our definitions and capitalization policies with Federal requirements. We suggest that GASB evaluate a more sophisticated structure for categorizing capital, preservation and maintenance costs and that federal (FHWA) definitions be considered.

Topic 11: Estimating Costs of Preservation (Survey Question Reference 29): You indicated difficulty in estimating the costs of preservation for purposes of GASB disclosures. What exactly were these difficulties? How did you go about overcoming them? Did your agency apply management systems (e.g., PMS, BMS, MMS) to estimate these costs? Were you concerned about the impact of these disclosures?

Response: See our response to question 27 above. Also, our asset management system is organized by program and only a portion of the system represents preservation costs. The differences in definitions (question 27 above) caused many questions to be raised on the GASB 34 requirements and they generated much discussion. The pavement management system (developed in-house) doesn't generate costs; these are derived from actual bids. BRIDGET is the bridge management system. The preservation costs of bridges are based on unit costs per square foot of bridge deck for four types of bridges, updated annually for planning purposes. The financial statement disclosures for planned versus actual maintenance and preservation were derived from budgetary information for the programs, less amounts capitalized in the preservation program.

Topic 12: Asset Classes (Survey Question Reference 28): You indicated three asset classes. Please describe the reasoning in reaching this determination. Do you expect that the number of asset classes might vary in the future?

Response: The state actually uses the modified approach to account for two asset classes that appear to fit the GASB definition of infrastructure—the state's highway system and its emergency airfields. The state's short rail line is actually depreciated and, therefore, should not have been checked in question #28 of the written survey. The state has no current plans to add to either our airfields or short rail line, but those plans could change. We would expect that neither the emergency airfields nor the rail lines will become significant infrastructure assets of the state. Also, when the question was answered initially, we were probably thinking of the 3 components of the condition rating disclosure (pavements, bridges and air fields).

Topic 13: Asset Threshold (Survey Question Reference 39): You reported that a capitalization threshold of from $75K to $125K was used to determine whether assets were significant enough to report. Were different thresholds applied to different asset classes?

Response: As noted in our response to question 27 above, $100,000 is the general capitalization threshold. DOT accounting and program management make other judgmental decisions based on all aspects of the construction.

Topic 14: Capitalization (Survey Question Reference 38): You indicated that project costs are capitalized based upon construction costs accrued each year. Please describe how the DOT defines capitalization.

Response: We capitalize our costs for accounting purposes only once per year. We do not use a "construction in process" account for infrastructure purposes. OFM—DOT infrastructure is not included in "construction in process" in the CAFR.

Topic 15: Historical Cost (Survey Question Reference 41): You indicated financial records on construction costs as your basis for estimating historical costs. Please describe the process used in making this calculation. How detailed are your inventory records with respect to costs? What are the details of deleting items and costs?

Response: We took the actual capital outlay costs in our construction programs for the years 1980 through 2001. While we have cost data by project in our system for some of the years, this information was difficult to pull together because of differing phases of work for our various projects, which are not necessarily easily connected. The historical cost data came from different accounting and asset management data sources and was generally summarized by Program Identification Number (PIN). This is just one example of the need for ad hoc reporting discussed in question 14 above. A reason for immediately reporting historical cost rather than taking advantage of the deferred implementation date was to avoid reporting a deficit for the State of Washington, although we were not pressured to do so.

Topic 16: Book and Replacement Value (Survey Question Reference 50 and 51): Your department reported an overall book value of $11 billion and a replacement value of $99 billion. Please describe how these estimates were calculated.

Response: The book value was derived from actual costs from 1980 to the present, as discussed in question 41 above. We did not use replacement costs and a deflator to arrive at book value. Right-of-way was not reported separately, but much of it was captured in the construction costs. Replacement costs, as reported to you in this survey, were based on the premise of a complete current re-building of the assets—$99 billion represented the mid-point in a range of $90 billion to $110 billion. Right-of-way was not included on the premise that it would survive even if the road network were destroyed. We have provided you the detail of our replacement cost calculations and you may publish this in your report.

Topic 17: Usefulness of GASB 34 Information (Survey Question Reference 52): Your response to question 52 of the survey as to usefulness of the GASB 34 information is interesting (useful in making the case for funding infrastructure). Tell us more about why you feel this way. In your opinion, what areas are at the greatest risk of misstatement when considering the new information and disclosures required to be reported under GASB 34?

Response: Increased usefulness of this information is our hope for the future. As we noted in the general comment at the end of the questionnaire, we would like to see GASB consider removing the requirement to use the depreciation approach if planned condition levels are not met over a period of time. Condition levels provide decision makers and the public better information than depreciation does. Disclosure information could be similar to that for unfunded pension liabilities. The current GASB requirement to switch to depreciation implies that the depreciation method is superior to the modified approach, a position we disagree with. Disclosure about all the considerations necessary for the modified approach is far more meaningful. Most of all, we believe depreciation is meaningless in this environment.

Topic 18: Condition Targets (Survey Question Reference 44): In response to question #44, you indicated that condition assessments will be used in budgeting & funding requests and in performance reporting through accountability reports.

Do condition targets influence the size of the preservation budget?

Response: See our response to question 6 above. We note that more detailed data is being requested by legislative committees. While this can result in information overload, additional data help legislators understand the factors necessary for budgetary decisions. The information has always been there and the increased requests for data may not be a result of GASB 34. Our systems have always supported funding requests. In the future, new questions may arise because of GASB 34. However, GASB 34 disclosures do not provide the level of detail needed for budgetary decisions.

Topic 19: Communications (Survey Question Reference 35): You indicated significant improvement in communications among the various offices within DOT. Could you describe further?

Response: More infrastructure data is being requested from multiple sources. Program Management—It is hard to judge whether this is a result of GASB 34. Bridges—We now have more contact with finance and that is good.

Topic 20: Resource Allocation (Survey Question Reference 35): You indicated significant improvement in resource allocation within DOT. Could you describe further?

Response: This is not completely fulfilled yet, but there is increased awareness by Department executives. We are getting better information from our asset management system and GASB 34 information to help us make trade-off decisions. This results in better resource allocation.

Topic 21: Implementation Costs (Survey Question Reference 12): You didn't provide an estimate of costs or staff time associated with GASB 34 implementation. Has there been an increase in time and cost of the financial audit as a result of GASB 34? Please provide as much detail as possible.

Response: All costs of implementing the infrastructure provisions of GASB 34 were absorbed by DOT. It required about 10–25% of Marcy's time for about one and one half years overseeing the implementation. Jodie Stanton spends about 25% of her time for three to four months in the summer of each year working on the detail. This is Daren Guyant's first year with major involvement with infrastructure reporting, so we do not yet have figures on his time.

CHAPTER 6

INFORMATION GAPS AND RESEARCH NEEDS

METHODS FOR CONDITION ASSESSMENTS AND PRESERVATION

Summary

While conducting the initial survey and follow-up case study interviews on GASB 34 implementation, the research team became aware of some issues and concerns of the state DOTs requiring additional information and research. As acknowledged by GASB Chair Tom L. Allen, "Statement 34 is the most significant change to occur in the history of government financial accounting." A change of this magnitude undoubtedly will require several years for affected agencies and their financial and management systems to fully absorb and make necessary adjustments. More specifically, there is a need for more detailed research on condition assessments and preservation methods that could (1) allow more integration of asset management data into the financial statement reporting process and (2) lead to better preservation results.

Background

GASB 34 required the implementation of a modified approach for the incorporation of condition assessment data into the financial statements. GASB reviewed a number of approaches generally based on methods of measuring whether or not infrastructure assets were being preserved. During the development of Statement 34, GASB heard from engineers and transportation finance officers and learned that, although these approaches are of great value in managing infrastructure assets, they have not developed to the point at which "consistent methods or measurement scales can be used to assess condition's sufficient for recognition in financial statements." The Board concluded that "additional research is needed" to determine if a workable, comprehensive "preservation method" can be developed (GASB 34 paragraph 340).

More recently, the Board has identified a long-term goal to move toward finer gradations of review rather than the current "on-off switch" determination on whether preservation targets have been achieved. The Board plans to add a project to its agenda to address this issue.

The research has shown that many transportation and finance officials think that depreciation of infrastructure is meaningless because it does not reflect how assets are managed or used. Nevertheless, the team's research also demonstrates that many DOTs (in fact, a slight majority) selected the depreciation approach for FY2002 because of a lack of comfort with condition assessments and preservation modeling and the uncertainty of having to shift from the modified approach to the depreciation model if targets are not met.

It has been suggested that if a more consistent method for condition assessments and preservation could be developed, a long-term approach to reporting condition assessment data in the financial statements that would relate to funding of preservation (similar to how pension expense is now reported by employers—see *NCHRP Web Document 63*) would be more meaningful than the current modified approach. If GASB ultimately were to approve an infrastructure financial reporting approach similar to that used for pensions, then some improvements suggested below might be implemented. Parameters would be used that would bring consistency to the process, but allow divergence in practice, based on the characteristics of the state infrastructure.

GASB staff have indicated an interest in tying condition assessment and preservation data to the financial statements (i.e., this would be desirable within the next 5 years).

The methods so developed would NOT be intended to compare state DOTs—indeed, pension reporting does not compare pension plans of governments. Rather, the methods would be intended to bring consistency in approach of measuring how well the DOT is preserving infrastructure in comparison with where the DOT wants to be with preservation. Unlike the current modified approach, the financial statements would directly report estimated preservation requirements as a separate element of expenses, rather than identify that information reported as "required supplementary information." This is exactly the type of measurement pension financial statements report—funding requirements based on one of several actuarial parameters.

Consistent methods would lead to more comfort among DOT and finance personnel with using condition assessments. Most important, GASB 34 has already given momentum to better asset management. The development of consistent methods leading to a different financial statement approach will continue that momentum.

To assist in this process, the research team suggests that the list of specific topics below warrant additional investigation. Further, this investigation should be conducted with

formal involvement of the GASB staff in order to enhance the effectiveness of the investigation.

Also, near the conclusion of this research project, the research team began hearing anecdotal reports of local governments receiving improved bond ratings after preparing FY02 financial statements in accordance with GASB 34's modified approach. The bond rating agencies did not officially disclose the reasons for rating adjustments, but the governments involved appear convinced that the modified approach was responsible. They used the Management Discussion & Analysis to disclose that they were effectively preserving their infrastructure and thereby were not accumulating unfunded liabilities for future generations to address. These governments believe that the rating agencies were favorably impressed by this analysis and adjusted ratings accordingly.

RESEARCH TOPICS

The specific topics proposed for additional research are listed below. For all of these topics, the intention is not to identify the single "right" answer, but to develop a list of best practices for the DOTs to select from based on specific circumstances. This approach is consistent with current GASB philosophy, which relies on principle-based standards, rather than a more prescriptive detail-oriented approach.

Methods for Condition Assessments

As noted above, GASB developed a "modified" rather than a "comprehensive" approach for condition assessment reporting because consistent condition assessment methodology has not yet been developed. Further, there is a lack of comfort of some DOT and finance officials with the use of condition assessments.

The objective of this research topic would be to develop more detailed, but still voluntary, methods for consistent condition assessments and disclosures that could (1) prove sufficient for future comprehensive GASB recognition and (2) result in more comfort and acceptance by DOT officials.

Linking Condition Targets to Required Expenditures

Virtually all modified approach states experienced difficulty in estimating the expenditure level necessary to achieve targeted conditions. In theory, such estimates should be available from asset management systems (e.g., the PONTIS bridge management system). However, the DOTs report that the current stage of deployment of such systems is not sufficiently mature to generate reliable estimates, with availability of data a particular problem. This finding is confirmed by earlier research that indicated that DOTs typically are not taking full advantage of the capabilities inherent in these systems.

A second problem is that the GASB 34 definitions of expenditure categories are not consistent with the definitions traditionally used in the management systems (and in DOT budgeting). Because of these two factors, the DOTs' estimates of required expenditures are based more on historical funding and budgetary patterns, rather than an analytically based estimate as GASB had anticipated. As the deployed capabilities of the management systems improve over time, this issue probably will become less troublesome. In the near term, however, there is a discrepancy between GASB expectations and DOT realities.

The objective of this research topic would be to identify practical near-term methods of arriving at an expenditure target and comparing that target with actual expenditures in a manner that meets GASB's objectives while still being as consistent as possible with the capabilities of DOTs' management systems as currently deployed.

Cost Categories—Capitalized Versus Expensed

As noted above, there is a discrepancy between GASB 34 cost categories and what is traditionally used by DOTs. The GASB 34 guidelines use a functional approach to these categories—maintenance costs achieve the original design life; preservation costs extend that design life, but do not increase capacity or service; and capital costs increase capacity or service. However, the traditional DOT definitions relate more to type of construction—a full reconstruction project is viewed as capital, whether or not lanes are added; a resurfacing project is viewed as preservation, whether or not there are ancillary safety benefits. These definitions are significant because they determine whether costs are to be capitalized or expensed in the financial statements. In particular, preservation costs are to be expensed in modified approach states, but research indicates that this is often not the case.

GASB has suggested that a potential solution is to allocate costs within a project to the three categories, but this is strongly resisted as impractical by the DOTs, which typically must account for hundreds, if not thousands, of projects each year. Some DOTs have suggested that the difference between the two approaches is not material for the purposes of financial statements.

The objective of this research topic would be to first assess the materiality of the difference between the two approaches by analyzing the annual construction program of a representative (but small) state. If the difference is material, the next step would be to develop a more sophisticated approach to cost categorization that would be meaningful to DOTs while still satisfying GASB objectives. Application of FHWA definitions would be investigated.

Additions and Retirements

Most DOTs had difficulty in accounting for additions to and retirements of infrastructure assets in their financial statements. They have, of course, traditionally tracked such changes in their physical inventory systems, but before GASB 34,

there was no reason to create a link to costs reported in the accounting system, disaggregated by asset class. Some DOTs (e.g., Michigan) were able to address this requirement through the use of work type codes.

The objective of this research topic would be to further develop the approaches employed by Michigan and others into a tool for additions and retirements that could be applied by many states.

Required Shift to Depreciation

Several DOTs questioned the wisdom of requiring a state to shift from the modified approach to depreciation if the condition targets were not achieved. They noted that a recurring failure to achieve targets indicated a problem, one that warrants public scrutiny. Requiring a shift to depreciation seems to suggest that, in effect, the solution to the problem is to stop disclosing it. (However, GASB notes that the logic behind requiring governments to begin depreciating if the infrastructure is not at or about the established condition level is that because the condition of the asset has dropped below a sustainable level, it can no longer be preserved indefinitely. Its useful life has gone from indefinite to definite.) The DOTs suggest that states be permitted to continue using the modified approach and that the shortfall continue to be reported, much as a shortfall in a pension program is reported.

The objective of this research topic would be to devise a method by which a state not meeting its condition targets could continue to use the modified approach, if it so chose. This method, which ultimately would have to be approved by GASB, would involve directly reporting preservation information in the financial statements, as discussed above.

Potential Effect on Bond Ratings

As noted above, several local governments have reported improved bond ratings as a result of preparing financial statements in accordance with the modified approach. Although a comprehensive review of local governments' compliance with GASB 34 is outside the scope of current or proposed NCHRP research, these reports are clearly of great interest to the state DOTs. If confirmed, there could be a substantial effect on how state DOTs comply with GASB 34. Of equally great interest would be to gain insight into the bond rating agencies' thinking as they determine whether a particular presentation in Management Discussion & Analysis is sufficiently persuasive to warrant an improved rating.

The objective of this research topic would be to confirm whether improved bond ratings have indeed occurred because of adherence to the modified approach and, if so, to better understand what factors are important in the bond rating agencies' review.

RESEARCH METHODOLOGY

Research would be performed through the following activities:

1. Enhance initial data collection on infrastructure reporting techniques with a follow-up questionnaire, for all states and selected local governments, that focuses on the research topics noted above.
2. Review and analyze data with follow-up telephone and site visits to selected states.
3. Determine best as well as most common practices, highlighting differences where appropriate for various state characteristics.
4. Outline multiple approaches as parameters for use in conducting condition assessments.
5. Review results with bond rating agencies to gain insight into their assessment of the effectiveness of various approaches.
6. Identify a list of recommended solutions for each of the items identified in the Research Topics section above. Review these recommendations with GASB and present them in cooperation with the GASB staff at the conference described in Step 7.
7. Conduct a second conference on GASB 34 implementation by state DOTs. (During the original survey and follow-up case study interviews, it was remarkable how many states noted the 2001 AASHTO conference conducted in Tennessee as a key step in their planning process. The research team believes that many DOTs would welcome the opportunity to compare notes again after the initial 2 years of implementation. The conference could also be used to present and receive feedback on the research topics described above.)
8. Throughout, consult with the NCHRP panel and GASB staff for direction that will result in a high probability of achieving complete integration of asset management techniques in the financial reporting process.

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Abbreviations used without definitions in TRB publications:

AASHO	American Association of State Highway Officials
AASHTO	American Association of State Highway and Transportation Officials
APTA	American Public Transportation Association
ASCE	American Society of Civil Engineers
ASME	American Society of Mechanical Engineers
ASTM	American Society for Testing and Materials
ATA	American Trucking Associations
CTAA	Community Transportation Association of America
CTBSSP	Commercial Truck and Bus Safety Synthesis Program
FAA	Federal Aviation Administration
FHWA	Federal Highway Administration
FMCSA	Federal Motor Carrier Safety Administration
FRA	Federal Railroad Administration
FTA	Federal Transit Administration
IEEE	Institute of Electrical and Electronics Engineers
ITE	Institute of Transportation Engineers
NCHRP	National Cooperative Highway Research Program
NCTRP	National Cooperative Transit Research and Development Program
NHTSA	National Highway Traffic Safety Administration
NTSB	National Transportation Safety Board
SAE	Society of Automotive Engineers
TCRP	Transit Cooperative Research Program
TRB	Transportation Research Board
U.S.DOT	United States Department of Transportation