

**REPORT OF THE GOVERNOR'S COMMISSION ON THE REFORM
OF THE CONNECTICUT DEPARTMENT OF TRANSPORTATION**

February, 2008

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Executive Summary

The Commission was formed in July, 2007 by Governor M. Jodi Rell, to make recommendations to reform the Connecticut Department of Transportation (ConnDOT). The failed I-84 construction project in the Waterbury-Cheshire area was the catalyst for its creation. However, the Commission was created to address broader issues.

The Commission held several public hearings and received oral, written, and e-mail communications from hundreds of Connecticut residents, through which a common theme emerged: ConnDOT badly needs fundamental change. Although ConnDOT often gets blamed for circumstances outside its control, the entire system of planning, funding, delivering, and maintaining transportation services, as well as establishing a broad-based mission and strategic goals, integrating transportation, economic development and competitiveness, and environmental considerations of which ConnDOT is a central player, is sub-optimal, which threatens the State's well-being, the quality of life of its residents, and the experience of all travelers. ConnDOT needs to redefine itself as a collaborative leader to facilitate better solutions.

The Commission also takes note of Commissioner Ralph Carpenter's recent decision to retire, and acknowledges his tremendous contribution to the Commission's efforts, as well as the several positive steps he initiated to improve ConnDOT during his tenure. The Commission supports Governor Rell's announced decision to engage in a national search for a new ConnDOT leader, because it is an opportunity to achieve the fundamental change required.

Preliminary Observations

- In making its recommendations, the Commission consciously benchmarked ConnDOT against the practices of other state departments of transportation, either individually or in terms of broad-based statistics. Specific states were studied in more depth when, in the Commission's opinion, they had noteworthy practices. Therefore, the Report, specifically in its body and appendices, describes practices in states such as Oregon, Iowa, Washington, Virginia, Missouri, Kansas, Utah, Ohio, Florida, California, Rhode Island, Michigan, North Carolina and New Jersey. More emphasis was given to departments in Oregon, Iowa, and Missouri, because those states are closer to Connecticut in population.

- The Commission also identified broadly prevailing practices, such as the 511 system implementation, the use of quality improvement programs, the ability to use alternative contracting methods, and the use of user-based revenue collection systems.

- Many who testified or otherwise commented to the Commission proposed bold strategies or structural or process changes, such as creating a completely independent transit or transportation authority, one not subject to annual legislative or executive branch controls. The Commission concluded that while some of the bolder structural or process changes might have merit, ConnDOT needs so much foundational reform that no significant structural change was recommended at this time. Moreover, the Commission concluded that, relative to ConnDOT's current situation, its recommendations are highly ambitious, and that, based on the experience of other states, the Commission's recommendations, if adopted, will be highly transformative.

- The Commission was not tasked to comment on strategy, so we did not make substantive strategic recommendations, except to the extent that we felt that such recommendations would be required to further the course of fundamental reform.

- Finance and funding options were within the scope of the Commission's charter, but, given the complexity of the subject and the time available to get the Report published, the Commission chose to separate this issue for a Phase 2 Report to be issued in mid-year 2008.

- Moreover, with respect to some of the Commission's recommendations, such as the recommended assumption of operating authority over rail station parking in the remaining towns on the New Haven Line, the Commission strongly believes that the recommendation should be phased in over time to give the other suggested foundational changes time to take effect.

Major Findings

The five working groups that reported findings and recommendations to the Commission developed dozens of individual recommendations involving ways that ConnDOT can better serve its stakeholders. But roughly speaking, the Commission's recommendations can be grouped into four areas:

- 1. ConnDOT must be more communicative, less insular, more responsive, and more open and transparent in all processes.**
- 2. ConnDOT must be accountable for achieving measurable results, consistent with continuous customer-driven quality improvement.**
- 3. Given the large and growing gap between needed and available funding, ConnDOT must be strategic in choosing what it will and will not choose to do.**
- 4. In a world in which federal and state funding will likely become continually harder to get, ConnDOT needs to be much more competitive in advocating funding for transportation in both Washington, D.C. and Hartford, and needs to be innovative in sourcing funding outside of traditional federal and state transportation sources. ConnDOT will need to tap other federal and states agencies, as well as private sector sources.**

One of the challenges in preparing these Recommendations was to communicate clearly both their interdependence and the underlying view of how transformational change has been successfully implemented in other states' DOT's. The Commission's fundamental assumptions about transformational change are:

- The proper sequence of actions is to develop strategy, goals, and actions first; to get the right leadership in place to execute that strategy; to get leaders to align the rest of the organization behind the strategy; to put quality and continuous improvement processes into place to have the organization work effectively through change; and then to decide on the right structure to deliver on the strategy.
- Before developing the strategy, ConnDOT needs to have had robust stakeholder engagement in strategy formulation and its needs to have the will, the leadership ability, and the tools to achieve that engagement. Therefore, the public engagement enabled by the first set of recommendations is required for ConnDOT to be effective in implementing the third set of recommendations with respect to strategy development.
- Once strategy is developed, it will succeed only if ConnDOT has a critical mass of "champions for change," and, thus, strategy development needs to engage the broad base of ConnDOT employees. A strategy and set of priorities cannot be forced on ConnDOT from the outside, especially in an environment in which virtually all employees, except for the senior leadership team, are career employees.
- The Commission believes strongly that adding new functions or expanding existing functions will work only if the Commission's recommendations on talent, process improvement, and leadership structure are adopted. By the same token, talent enhancement and process improvement will work only in a highly transparent environment.

In each of these four areas, the Commission developed specific Recommendations of actions to be taken by ConnDOT or another entity. The Purpose of each Recommendation is briefly explained, along with the expected Result of taking each recommended action.

The following four charts provide a synopsis of the Recommendations made in each area. The Recommendations are described in more detail throughout the report.

1. ConnDOT must be more communicative, less insular, more responsive and more open and transparent in all processes.

In today's transportation environment, one state agency, working mostly by itself, cannot accomplish much. Stakeholders of all types – legislators, other state agencies, contractors, federal agencies, the traveling public, the Executive Branch, environmental groups, and others must be part of a robust process for actively working with the people ConnDOT serves.

Recommendation	Purpose(s)	Result
Create a Citizens' Representative Office. It would report to the Commissioner, or, if such a position is created, to the Chief Operating Officer. As part of creating this office, a service standard must be created and publicized for the public. A proper staffing level to achieve these standards must be implemented as well. Both a service standard and staffing levels can be established through benchmarking.	• Receive day-to-day feedback from the public on transportation issues, and on how well or poorly ConnDOT fulfills its mission. It would provide responsive customer service on individual complaints involving day-to-day ConnDOT operations, and facilitate two-way communication between individual citizens and ConnDOT, including conducting periodic citizen satisfaction surveys. • It would also use the Internet and develop and manage a "511" telephone system (see below) to provide real-time traffic and public transportation information.	• Improved communication and feedback from stakeholders to assist ConnDOT in improving operations. • Greater citizen empowerment to participate in solving the State's transportation problems. • Better conflict resolution among stakeholders. • Better access for Connecticut travelers, as well as taxpayers, on current transportation information.
Implement a "511" telephone system.	• Other states have adopted a "511" phone number for citizens to get timely, accurate, and reliable travel information. Funding issues have prevented ConnDOT from implementing one, but it needs to accelerate its efforts to do so.	• Better, easy-to-get information on delays and other up-to-the-minute transportation information.
Make ConnDOT more transparent in all its communications and business processes, but in conjunction with the mapping and simplification of all these processes.	• The ConnDOT web site should provide easy-to-understand and timely information to all stakeholders, including the scope and timing of every project, its status, and the specific person within ConnDOT accountable for the project, along with ways of reaching that person. • The contracting process should also be made clear. Qualified vendors should be identified. Criteria for contract selection should be explained. • All of the businesses processes that will become more transparent need to undergo a mapping and a simplification process.	• Greater transparency will make it easier for stakeholders to hold ConnDOT accountable, and, more important, for ConnDOT to be accountable for results. • Better informed travelers make good transportation decisions. All stakeholders would be able to know where to get additional information on a project. • Contractors and consultants can better document their qualifications and draft their proposals to relate to the project at hand. • More transparency can lead to a much higher level of ethics in business practices.

Recommendation	Purpose(s)	Result
To the degree that project work can be predicted, give consultants and other contractors more transparency relative to anticipated projects.	ConnDOT's selection of engineers and other professional consultants is governed by a law enacted in 1982. Contractors have complained about the need for improved construction documents.	Contractors and others will more easily determine for which projects they wish to submit proposals, leading to a more competitive bidding process.
Make sure that the Public Contracting Standards Board consults with the newly-created Vendor Advisory Council.	New legislation has created a Vendor Advisory Council, to work with the Public Contracting Standards Board. It will be necessary for both entities to work closely together.	Increase in vendor confidence related to ConnDOT projects, and better adherence to contracting standards.
Increase DOT's strategic planning capability and strategy development capacity. Reconstitute the Transportation Strategy Board's charter and membership to require all members to represent all stakeholders, to draw from a broader set of backgrounds and experiences, and to enable the State to make strategic choices.	- Transportation strategy cannot operate in a vacuum, because it affects economic development, the environment, employment, and other areas. If ConnDOT is to play a meaningful role in planning transportation strategy, it must move beyond project-based planning to true strategic planning, which would incorporate economic development and competitiveness, environmental, public safety and other public policy goals and objectives. - TSB membership needs to be reconfigured, with every member appointed based on his or her ability and requirement to represent the interests of all citizens, instead of specific, designated stakeholders. The TSB also needs to have a reconstituted charter and agenda to advise the State's elected officials and ConnDOT on strategic choices and priorities.	Both ConnDOT and the TSB will work toward responsive, innovative state transportation strategy.

2. ConnDOT must be accountable for achieving measurable results consistent with continuous customer-driven quality improvement.

Too often, failure to meet goals or fulfill its mission has been considered “business as usual” at ConnDOT. As with any state agency, there are external considerations that affect what ConnDOT is able to accomplish, including financial limitations and a large number of federal- and state-imposed regulations. Nevertheless, in collaboration with all key stakeholders, ConnDOT must take the primary responsibility for the State's transportation systems and be accountable to all stakeholders, particularly system users. ConnDOT should always be tasked to incorporate economic development and competitiveness, environmental, public safety and other critical state policies into its strategies and plans. There are two separate concepts contained in this broad recommendation: (1) operational effectiveness through measurable customer-driven quality improvement; and (2) performance accountability.

Recommendation	Purpose(s)	Result
Undertake a complete talent assessment, as well as an assessment of ConnDOT's recruitment, training and career development processes, as well as its processes for determining how and by whom work should be performed.	• There needs to be a thorough analysis of ConnDOT to determine whether it has the appropriate mix of talents to address challenges and opportunities. This analysis should also address the many comments the Commission received about the need for more or different qualifications for specific positions, as well as the training requirements for positions. This analysis should determine the degree to which technology can supplement people. An independent expert should be retained to update the 1994 study, which evaluated the economics of outsourcing versus insourcing, and determine, consistent with the requirements of the recently-enacted Clean Contracting Standards Act, the best and most cost-efficient way to complete ConnDOT's work. This analysis should also evaluate whether ConnDOT has the best training and career development processes to develop its talent.	• ConnDOT will better understand its future priorities, its existing talent to meet these priorities, and how technology, training and employee changes can meet the state's needs.
Adopt a Quality and Continuous Improvement Program, such as the Baldrige criteria, Six Sigma, Kaizen, or LEAN.	• These various programs generally incorporate five principles: (1) Defining and documenting existing processes; (2) Measuring existing processes; (3) Comparing existing processes against "best-in-class" processes, and defining "best-in-class" through customer or public-supplied input, and through benchmarking successful practices implemented by other transportation authorities, including DOTs from other states; (4) Continuously improving processes to eliminate the gap between existing and best-in-class versions; and (5) Incorporating controls, often technology-based, that lock in improvements.	• ConnDOT will be able to pinpoint its areas of strength and those that need improvement, from paying invoices to seeking public comments on projects. • The agency's use of taxpayer funds will be more transparent and the quality of its work will improve. • ConnDOT will get the benefit of learning from the experiences of other transportation authorities and particularly other state DOTs. • A continuous improvement program will give ConnDOT employees permission, support, and recognition for suggesting improvements, something that appears to be missing today.
Implement complete process mapping and benchmarking.	• One of the first tasks of the new ConnDOT Commissioner should be to hire consultants to help ConnDOT learn how to map every process and every job responsibility. Ultimately, while the consultant can help initiate the process and train and guide ConnDOT, ConnDOT must have well-informed and trained internal champions who will lead the process mapping efforts. Three processes in particular have been identified as areas needing mapping and improvement: (1) The hiring process, managed jointly with the Department of Administrative Services; (2) Contract and legal document review, shared with the Attorney General's office; (3) The dispute resolution process, in terms of timeliness of dispute resolution and payment.	• ConnDOT will have a much better idea of which processes add value closest to its mission and priorities. • ConnDOT will also develop a broad-based skill set in imbedding process discipline in the organization.

Recommendation	Purpose(s)	Result
Adopt, as appropriate, contracting methods new to Connecticut, but only if ConnDOT has the in-house capability to supervise the contracts closely and continuously.	One such method is the use of “design-build” contracts. Under this system, one entity performs both design and construction under a single contract, which, when appropriately adopted, has been proven to save significant money and time.	New contracting methods, when appropriately adopted, will significantly reduce construction time and costs. To the degree that the same firm performs both design and engineering, ConnDOT will achieve greater single-source accountability for projects.
Announce priority process improvement projects and goals, plus process owners and timetables.	Publicizing such projects and goals, as well as a projected time frame and the individual responsible for the project, will lead to more accountability. Continuously report on progress measured against goals.	Public accountability often leads to a greater likelihood that a project will be completed or a goal reached on time and under budget.
Create the position of Chief Operating Officer, as an appointed position, reporting directly to the Commissioner.	A Chief Operating Officer, as an appointed position, should assist the Commissioner in handling the day-to-day running of the Department, and focus on project excellence and relationships with affected communities. The Commissioner should consider whether to integrate all operations under the Chief Operating Officer.	ConnDOT’s executive leadership will be appropriately focused on external and internal needs.
Realign the Commissioner’s duties.	The Commissioner’s role should be more specifically focused on policy, strategy, and relationships with key stakeholders such as the Executive Branch, the General Assembly, the federal government, the Congressional delegation, and neighboring state transportation officials.	The Commissioner will be better able to fulfill a more comprehensive role.
Establish a Leadership Council, and replace ineffective and underperforming leaders. Give every member of the Leadership Council an additional responsibility for managing ConnDOT’s relationship with a key constituent, such as the General Assembly, the municipalities, the MPO’s, Metro-North, the Executive Branch, and the Congressional delegation.	The new ConnDOT Commissioner should establish a group to work specifically on leadership issues and rigorous management processes. According to the Council’s standards, ineffective or underperforming management should be replaced. The Leadership Council should include the entire senior leadership team, and should create a mechanism for greater collaboration in decision making throughout ConnDOT.	ConnDOT will have a much more effective and collaborative leadership team.
Separate the Bureaus of Highway and Engineering, and enhance the skills of engineers to perform planning and operations functions, as well as engineering.	All engineering functions would be handled by a new Bureau of Engineering, in much the same way that all financial functions are currently being consolidated in the Bureau of Finance and Administration. However, because of the interaction among planning, operations and engineering, make sure that there is a movement of engineering talent across these functions to insure good cross-fertilization of ideas.	Separation of the Bureau into two discrete parts will insure that engineering activity and engineering skills relative to broader needs, including building construction will be given appropriate focus. There will be improved oversight of the highway system. Movement of talent across functions will improve collaboration as these functions separate.
Continue the effort to centralize finance functions.	A single shared finance office is cost-effective.	Finance expenses will be reduced, and the finance function will be more scalable to manage a greater variety and complexity of funding sources.

Recommendation	Purpose(s)	Result
Commit ConnDOT to using the CORE financial management software package department-wide.	The CORE financial management software package requires that each project have its own separate financial budget, and that project expenses be paid from that budget, and not from general ConnDOT funds; it will also enforce a set of appropriately precise rules regarding whether and when payments can be made, and insures that ConnDOT has processes in place to comply with them. ConnDOT will also improve its ability to plan, estimate, monitor, and manage project costs and scope.	- ConnDOT will have a transparent, precise, and accountable financial system, as well as more disciplined project cost management processes, increasing the confidence of vendors, stakeholders, legislators and taxpayers. - ConnDOT will also enhance its ability to manage a greater variety of funding sources, and to absorb more innovation while maintaining productivity.
Strengthen the internal and external audit functions.	- Internal and external audit functions should be enhanced while maintaining current reporting relationships. ConnDOT needs to increase both the number of auditors and the skills sets of the auditors to enhance the audit function's ability to identify areas for operational improvement. - ConnDOT also needs to assess whether it is conducting audits with the frequency and the depth required to identify significant internal control issues.	- ConnDOT's ability to function effectively will be enhanced. - Better auditing will make ConnDOT an easier organization with which to do business and will increase its attractiveness for potential vendors.
Pursue measures to assure that new technologies are both considered and implemented, and properly supported. But do not introduce technologies without the resources necessary to support them.	- New technology can significantly improve the overall operation, efficiency, and effectiveness of ConnDOT. - But when considering introducing technology, remember that human and financial resources are needed to maintain, support, and upgrade it from time to time. Technology decisions and utilization should be regularly and candidly assessed in terms of real effectiveness. - Although the Commission does not recommend having a separate chief information officer or chief technology officer, we believe that ConnDOT should have IT and technology managers and professionals capable of translating and refining the enterprise systems the State has implemented in tune with ConnDOT's unique requirements.	Ways to improve overall operation, efficiency, and effectiveness will result in a more cost-effective ConnDOT, better able to serve its stakeholders.

3. Given the large and growing gap between needed and available funding, ConnDOT must be strategic in choosing what it will do and not do.

Projects should be undertaken because, after a disciplined decision process, they are determined to support ConnDOT's overall mission and strategy.

Recommendation	Purpose(s)	Result
Hire an Office of Strategy and Evaluation leader reporting directly to the Commissioner.	This office would work closely with Strategic Planning and Evaluation to ensure that the state's strategy is directly taken from the transportation strategic plan. This position should be an appointed position.	Credibility in the planning process among ConnDOT employees, legislators, stakeholders and taxpayers is restored when all see the link between the plan and the state strategy.
Establish a function with dedicated non-motorized transport responsibility.	This function would be responsible for all non-motorized transport initiatives and goals, including specific goals relative to pedestrian, bicycle, smart growth, travel demand management, and improved use of information to increase the yield from existing transportation assets.	ConnDOT ensures a balanced and forward-thinking approach to its state strategy.
Establish a staff position, directly supporting the Commissioner, to assist in key political relationships, in addition to the legislative liaison position.	This function would assist the Commissioner in strategy development and dialogue with the General Assembly, the Executive Branch, and the federal government.	ConnDOT's engagement on issues such as community development, environmental protection and climate change, and energy conservation would be greatly enhanced.
The Governor should continue this Commission's Finance and Funding Working Group.	The Group, led by Office of Policy Management (OPM) Secretary Robert Genuario, would continue its in-depth analysis of future funding requirements and sources. This Working Group should complete its report by mid-2008.	Legislators, stakeholders, ConnDOT and others will gain greater awareness of finance and funding options for the state as it considers its long term goals.
Ensure that a comprehensive asset management strategy is in place and gets the appropriate relative highway capacity expansion.	- Fixing the State's existing transportation infrastructure, particularly its deficient bridges, roads, and service areas, must take priority over building new highway capacity in most of the State, particularly the parts of the State that are largely built-up. - Enhance ConnDOT's small, but capable, Asset Management Unit in the Bureau of Policy and Planning function to give it more of a priority relative to ConnDOT advocates for capacity expansion.	Making the State's current transportation system as safe, reliable, and useful as possible will be a priority.
Make inter-modal and multi-modal travel a high strategic priority.	ConnDOT needs to design as many of its transportation assets as possible with a goal of moving toward multi-modal use. For instance, roads should have bicycle paths, and rail stations should provide easy access for vans, bicycles, and pedestrians.	Less congestion and pollution comes with less reliance on the automobile as a means of transportation.
Improve ConnDOT's capability to develop and implement a comprehensive rail freight plan.	Improve the state's integrated multi-modal planning relative to the movement of goods.	Better and more cost-efficient movement of goods.

4. In a world in which federal and state funding will likely become continually harder to get, ConnDOT needs to be much more competitive in advocating funding for transportation in both Washington, D.C. and Hartford.

Recommendation	Purpose(s)	Result
Create a dedicated position with responsibility for developing innovative funding methodologies.	This position would re-evaluate ways to obtain sustainable funding both in terms of state and federal monies. It would work with the General Assembly and the Executive Branch to enact any necessary enabling legislation. And if the State decides to adopt electronic tolls and/or a variable toll pricing system, it would be responsible for its planning and implementation. This position would also develop innovative local and private sector sources of funding.	- Connecticut will be more successful in securing funding at the state and federal levels. - Connecticut will also develop a broader range of innovative funding strategies, which will create less need to rely heavily on energy-usage-based taxes that are likely to generate insufficient revenue over time.
Enhance ConnDOT's Washington, D.C. presence with either an outside expert resource or a full-time employee.	- ConnDOT needs to have full-time presence in Washington to secure federal funding in an environment in which such funding is harder to secure, contains more complex and onerous conditions, requires more creativity in meeting those conditions, and requires legislative earmarks rather than direct transportation grants. Whether ConnDOT uses an outside expert resource or a full-time employee should be determined by the Commissioner, and may change from time to time. - ConnDOT's senior leadership should also be tasked to spend more time in Washington to enable the State to be most effectively positioned to tap into more innovative federal funding sources.	Connecticut will maximize its ability to secure federal funds from the greatest variety of sources over time, particularly in a highly-competitive and more revenue-challenged environment. Connecticut will maximize its ability to secure federal funds from the greatest variety of sources over time, particularly in a highly-competitive and more revenue-challenged environment.

Longer-term recommendations to create a more integrated transportation network:

Recommendation: To achieve more integrated responsibility for rail transportation, ConnDOT should accelerate the process of taking operational control of parking areas adjacent to the rail stations, and must find other ways to expand train access, such as expanded bicycle, pedestrian and shuttle bus access.

ConnDOT should immediately formalize and standardize all operating terms and conditions as long as the towns continue to operate the stations, and should have a process of taking over a few stations at a time with a goal of completing the takeover within a reasonable period of time. ConnDOT should develop a methodology for accommodating the interests and needs of the towns to the degree that the accommodation does not compromise broader transportation goals.

Recommendation: Create better integration and coordination for all major transportation systems, including airport, port, and bus services not owned by the State today.

This integration is needed because significant responsibility for delivering transportation services for Connecticut resides outside ConnDOT, either in smaller units of government or private operators.

Recommendation: The State needs to consider bolder strategies for longer-term implementation. Among these strategic alternatives are:

- Consider having under ConnDOT's authority either a fully-integrated multi-modal transportation authority, similar to the Metropolitan Transportation Authority in New York, which has responsibility for rail, bus, and bridge and tunnel transportation assets, or an independent public transportation authority responsible for the public transportation operations of the State. The integrated multi-modal transportation authority could operate statewide or in specific geographic areas, such as the Southwest Connecticut coastal corridor, and would have considerably more operating independence than it does today. This decision should not be implemented until ConnDOT has substantially addressed the four major sets of recommendations.
- Effect statutory authorization for a pilot test for technology for identifying vehicles involved in traffic moving violations, and consider broader implementation after the pilot test is deemed successful.
- Consider which transportation assets could be assembled for particular kinds of public-private partnerships that could upgrade and maintain transportation assets faster and potentially less expensively and more flexibly than ConnDOT can do. This recommendation should be studied in more depth and should be addressed in the phase 2 Finance and Funding Working Group report.

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THE GOVERNOR'S COMMISSION REPORT ON THE CONNECTICUT DEPARTMENT OF TRANSPORTATION

The formation of this Commission was announced in April, 2007, by Governor M. Jodi Rell. The final members were announced on July 10, 2007. Our first meeting was held on July 17, 2007, in Hartford, and our last meeting was held on January 18, 2008, also in Hartford. Our charter was to make recommendations to reform the Connecticut Department of Transportation. (Hereafter referred to as ConnDOT.) No limits were placed on what we might recommend, although we wanted to balance bolder recommendations with recommendations that could be implemented relatively easily and quickly.

Why this Commission Was Created

There is a broad-based view among both government officials and private stakeholders that ConnDOT, as the primary deliverer of transportation services, is badly broken.

The reality is more complicated. As the Commission found, ConnDOT does many things well, gets excellent or at least average results in many areas, and must deal with many circumstances over which it has little or no control. Unfortunately, ConnDOT is no worse and, in many instances, better than other states in addressing issues transportation departments are facing all over the country. But why is ConnDOT perceived to be so badly broken, and what are the risks of not taking bold action to reform it?

- As we will point out, Connecticut does not have an imminent financial crisis relative to transportation, compared with states like Massachusetts, New Jersey and New York. Nonetheless, it is predicted that there will be a large funding gap over the next 10 years between anticipated revenue sources and the funds needed to maintain the existing transportation system. This gap does not take into account any capacity whatsoever for expansion.
- As the State's major source of funding for transportation projects, the federal government could decrease federal transportation funding for Connecticut. There is no other currently-used funding source within Connecticut with the potential to fill the gap without significant, and probably unacceptably high, levels of increased fees and taxes. We believe there are many additional potential federal and state funding sources, as well as private sector opportunities, but at present ConnDOT is not organized or staffed to secure them to the maximum extent possible.
- ConnDOT is understaffed and underskilled in specific skill areas to do the work required to carry out the projects anticipated in its 2007 Master Transportation Plan, and it has the potential to experience a significant number of retirements over the next five to 10 years, which, if not addressed, will reduce its capabilities even further.
- ConnDOT needs to take the lead in helping the State manage its way through this looming crisis, but a significant number of lawmakers and other stakeholders do not trust it to spend the public's money wisely, and, therefore, use other mechanisms like the Transportation Strategy Board (the TSB) to compensate for ConnDOT's weaknesses.
- This lack of trust is a result of perceptions of ConnDOT's unresponsiveness and lack of flexibility in adjusting its position relative to stakeholder input. There are also perceptions that ConnDOT is unable to manage big projects well, that it does not hold its management and employees accountable for performance failures, and that there may be in some pockets of the organization a residual level of corruption that compromises time, cost, or quality on projects. This Commission was not tasked to investigate specific allegations of corruption, and, therefore, is not in a position to identify where it might exist, but we received testimony that there are still areas in which a culture of ethical behavior is not as deeply rooted as it should be.
- As a result, what would normally make the most sense in helping the State address this future crisis in maintaining our vital transportation infrastructure, empowering ConnDOT to take the lead in prioritizing transportation investments and actions, is not currently workable, because of a basic lack of stakeholder confidence and trust in ConnDOT. In fact, many bolder options for restructuring ConnDOT proposed in many comments submitted to the Commission would also not be workable until ConnDOT makes improvements that enable stakeholders to trust it to carry out its strategies, plans and projects. ConnDOT needs foundational cultural, operational, and talent-related change that would then enable broader structural and strategic change.

What would an appropriate role for ConnDOT look like, in an environment in which there is a scarcity of resources to achieve the desired vision and strategic goals outlined by the TSB in its 2007 Report?

David Osborne and Peter Hutchinson, in their book *The Price of Government: Getting the Results We Need in an Age of Permanent Fiscal Crisis*, described successful examples of governments coming to grips with strategic choices in an environment of scarce resources. They stated that successful strategic efforts designed and executed on processes to answer five questions:

- Is the real problem short or long term?
- How much are citizens willing to spend?
- What results do citizens want for their money?
- How much will the state spend to produce each of these results?
- How best can that money be spent to achieve each of the core results?

There is no single “silver bullet” solution that will restore sufficient stakeholder confidence in ConnDOT so that it will be empowered to do everything required to help lead the State in developing and implementing a comprehensive transportation strategy integrated with economic development, environmental, public safety and other public policy goals.

A realistic goal would be for ConnDOT to build trust and confidence and, in so doing, gradually acquire the authority it needs to lead the State forward. After discussing some elements of the current situation, we will give two representative examples of the role ConnDOT might play in addressing some potential strategic priorities. Still, we recognize that ConnDOT is far short of having the trust and confidence of stakeholders that it could eventually play this role.

In this Report, we will describe the structure and the actions that will be catalysts for building that trust and confidence. But first, we will briefly present some metrics that highlight today's situation.

ConnDOT's Performance: A Mixed Picture

A few of the many available metrics will describe Connecticut's performance. According to the 2006 Federal Bureau of Transportation Statistics report (reviewing 2005 data), Connecticut does extremely well in metrics associated with highway and pedestrian safety. For example:

- It averages 7.8 fatalities per 100,000 people (national average: 14.7);
- Pedestrian fatalities are 1.0 per 100,000 people (national average: 1.6);
- Large truck involvement in fatal crashes is 4.6% of the total, (national average: 8.3%).
- The rural interstate roads are in excellent shape, with none in poor condition and only 1.22% having excessively narrow lanes. Fatalities on rural roads are also below the averages of other states.

In the near term, Connecticut's transportation financing and funding mechanisms are not a problem. The State has covered the principal and interest on state transportation bonds with revenues at a 2.8X ratio to expenses, above the required 2X ratio in its bond covenants. Unlike Massachusetts, New Jersey, and New York, Connecticut is not at imminent risk of transportation fund insolvency. However, there is reason for concern. For example, the Commission received testimony from the Office of Policy and Management that the Special Transportation Fund (STF) expenses have been and continue to grow about twice as fast as revenues. Connecticut also has been successful in operating within a balanced budget framework relative to transportation expenses. Connecticut's motor fuel tax rate of \$.25 per gallon is in the middle of the pack. Connecticut has also recently increased the gross receipts tax on the price of oil and gasoline to 7%. However, Connecticut has an inherently unstable financing and funding structure, and a growing funding gap. If these problems are not addressed soon, Connecticut could very well find itself unable to pay for basic transportation needs.

Connecticut has also been an innovator in beginning to use weighing-in-motion technology in the truck weighing station in the town of Union, and the Connecticut Highway Assistance Motorist Patrol (CHAMP) program is well received by motorists and considered leading-edge by other states.

The State's road condition metrics are relatively close to the national average, with both Connecticut's roads and the national average being at roughly 41% in very good or good condition.

Connecticut has a very high level of urban highway congestion, far above the national average in terms of the percentage of miles of highway experiencing congestion. Its level of congestion on urban highways, such as I-95, I-84, I-91 and State route 15, exceeds 65% of the highway miles, compared with a national average of 51%, according to a 2007 analysis by the Reason Foundation. Moreover, as written testimony reported, a Texas Transportation Institute study indicated, traffic delays have grown in the Bridgeport, Stamford and Hartford areas by 350% from 1985 to 2002.

Connecticut is worse than the national average in the condition of its bridges: 33.3% of the State's bridges are either structurally deficient or functionally obsolete, against a national average of 26.2%. States with higher percentages than ours are all in the older northeastern and mid-Atlantic states. Moreover, as ConnDOT pointed out in the 2005 Report entitled *Transportation in Connecticut: The Existing System*, 206 of the 325 railroad bridges in the State are in less than satisfactory condition. The State's need to depend more heavily on rail transportation means that this problem needs to be addressed urgently. We were pleased to see that, in the recent announcement of the \$480 million rail catenary system upgrade project, ConnDOT has added funding for repair and/or replacement of 14 railroad bridges.

Connecticut rates unsatisfactory in the condition of our highway commercial service areas, largely because most of them were constructed more than 50 years ago. Upgrading those on the Merritt Parkway is challenging because of the space constraints and the historic preservation classification of the Merritt Parkway system.

A substantial portion of ConnDOT employees are engaged and passionate about their mission. The Commission requested, and the Department of Administrative Services administered, a confidential survey of ConnDOT employees. Some 63% participated, an extremely high percentage for a first-time survey. The respondents' passion and engagement throughout the Commission's review process was evident both in survey results and in one-on-one interviews and group meetings. At the same time, implicit in these survey comments are some deep areas of dissatisfaction described later in this Report.

Finally, the State has been remarkably successful in securing federal transportation funding for its projects. In the late 1990's, ConnDOT helped the State secure \$1.44 in federal transportation funds for every \$1.00 contributed to the Federal Highway Trust fund. Unfortunately, as we will discuss later, recent federal legislation has begun a process to equalize future federal transportation fund disbursements and eliminate the large advantage ConnDOT enabled the State to secure. Moreover, federal budget constraints will either reduce available federal transportation funds, or require federal gas tax increases. To continue to be competitive and to become more creative in securing federal funding from both transportation and non-transportation sources, ConnDOT needs to have both a stronger presence in Washington, D.C. and individuals focused on finding more innovative funding sources from the federal government, from the State, and from private sector sources.

Thus, Connecticut has a mixed transportation picture. These facts also show that Connecticut has an aging transportation infrastructure, a likely significant funding shortfall to meet the State's transportation needs, and serious deficiencies in capabilities and cultural obstacles within ConnDOT that must be addressed to avoid a future disaster.

In a January 9, 2007, report to members of the New York State Senate, the American Automobile Association described New York State's transportation crisis, quoting a March 2005 study by New York University's Rudin Center. The quote is equally applicable to Connecticut's current situation:

“...without major increases in funding, bridge, and highway conditions will likely deteriorate significantly... creating long-term costs for rehabilitation and replacement that will be greater – in the long term – than adequately funding maintenance and rehabilitation work over the next five years. Likewise, congestion on already-clogged highways will worsen...obstructing both person and goods movement and undermining the quality of life and economic vitality...”

The following examples illustrate the gap between how ConnDOT must function and how it functions today.

Example 1: A Strategy of Bringing State Bridges Up to Satisfactory Standards

Connecticut clearly has significant issues with sub-standard bridges in general, particularly railroad bridges. Stakeholders should expect ConnDOT to provide clear, transparent, rigorously supported data to inform them of the following:

- All bridges that are sub-standard, and the level of their deficiency;
- The volume of traffic using the bridges daily or annually;
- A reasonable estimate, given assumed annual wear and tear levels, of when the bridges will no longer be usable;
- The cost and time required to bring the bridges up to satisfactory levels;
- The potential disruption caused by the repair work, and strategies for mitigating that disruption; and
- ConnDOT's recommendation regarding the prioritization among the bridge repair projects, and the rationale for that recommendation.

To illustrate a piece of what we are describing, see Appendix 1, which illustrates how Missouri not only reports on its progress in bringing bridges up to satisfactory standards, but compares itself to Ohio. Kansas has a full listing of all bridges, an evaluation of their condition, and the times of the last above-water and underwater inspections.

ConnDOT needs to engage the Executive Branch, the General Assembly, other affected state government agencies, the communities affected, and other stakeholders to get meaningful feedback on the recommendation.

Today, ConnDOT publishes a list of projects in the Master Transportation Plan, and in the 2008 Long-Range Plan, but the existing lists do not link to a set of criteria that can be evaluated by stakeholders. The data supporting each decision are incomplete, and the process of seeking out stakeholder feedback is not linked to any ConnDOT decision. In effect, ConnDOT has not done the job in moving stakeholders toward a statewide consensus on the urgency of upgrading our bridges.

Example 2: Reducing Unpredictable Delays by Reducing the Frequency and Duration of Incidents

The State gets high marks for having below-average highway fatalities, and for programs like CHAMP that reduce the duration of incidents causing unpredictable delays. However, because of urban highway congestion, a further reduction in incident frequency and duration would deliver significant benefits to Connecticut.

What role might ConnDOT play in this process?

First, it should publish the data that shows the number, timing, and location of incidents. Best-in-class reporting from other states demonstrates how Connecticut could report on its progress. Appendix 2 shows how Missouri reports on the average time to clear incidents in St. Louis and Kansas City, and shows how it is progressing over time toward reducing the duration of incidents.

Second, it should work with other state agencies to identify root causes and potential remedies, which would include investments in road redesign, improved signage, better citizen reporting systems, and faster incident clearance. Other agencies might lead in looking at better law enforcement, better targeted driver population licensing strategies,

redesigned automobile insurance policies, safer motor vehicle technologies, and even campaigns to reduce driving at certain times or locations or under certain conditions.

Third, it would propose a prioritized list of transportation investments that would enable transportation assets to contribute to fewer incidents. It would work collaboratively with the Executive Branch, the General Assembly, other state agencies, affected communities, and other stakeholders, such as licensed automobile insurance companies and motor vehicle manufacturers, to develop a comprehensive safety and incident reduction plan.

Today's ConnDOT does not work across governmental lines to the degree needed, and is also not equipped to work with non-governmental stakeholders to address these problems. This Commission's recommendations, if implemented, will result in ConnDOT's having better capabilities to play the optimal roles described in these two examples.

The Catalysts for This Commission to be Formed

Why did the Governor and State lawmakers feel it necessary to take a fundamental look at ConnDOT? To some degree, the recent I-84 construction project in the Waterbury-Cheshire area was the catalyst. It produced a "perfect storm" of poor quality work, cost overruns, significant time delays, and the insolvency of a major pre-qualified vendor, as well as allegations of ethics issues.

Two fundamental concerns were raised by the ethics issues:

- Were decisions affecting safety, work quality, cost, efficiency and time to complete work compromised by unethical behavior by either State employees or contractors?
- Even if ethics issues did not affect the quality of state work, did they erode public confidence in ConnDOT and, by extension, other functions of State government?

The Commission's fundamental assumption is that ethics issues are part of a much larger set of systemic problems which, if addressed, will significantly reduce the likelihood, the magnitude, and the frequency of ethics violations.

The Commission has concluded that the entire system of planning, funding, delivering, and maintaining transportation services, of which ConnDOT is the central part, needs serious re-examination. While we will discuss the broader environmental and stakeholder context in which ConnDOT operates, we will focus on what we believe ConnDOT itself can do to make the system work better.

Insights Regarding the State's Transportation Issues

We hope this report begins a process of educating lawmakers, businesses, citizens, State employees and managers, as well as other interested stakeholders, with respect to a number of insights and their implications for ConnDOT reform recommendations.

Insight:

ConnDOT has an increasingly limited freedom of action to address transportation issues because of encroachment from federal and state laws and regulations relating to transportation, the environment, homeland security, public safety, and economic development. ConnDOT is not an all-powerful, autonomous transportation capacity and maintenance agency. It is the center of a complex web of stakeholders, with the most powerful decision-maker relative to strategy being the federal government.

Implications:

- Delineating what ConnDOT can do and what is constrained from doing is critical to the success of any reform initiatives;
- Having the skill within ConnDOT in negotiating and interfacing with the federal government and with the other stakeholders is more critical than ever. This is a huge skill gap within ConnDOT.

Insight:

Many other states have experienced similar, or even broader, issues with respect to delivering transportation services.

Implication:

- Benchmarking the experience of other states is an essential exercise and ought to be pursued by ConnDOT. Throughout this Report, we identify good practices from other states facing our issues. In fact, we have made most of our recommendations based on best practices from other state departments of transportation, and, to the degree possible, have identified states relatively close in size and population to Connecticut. ConnDOT has relatively little systematic contact to enable it to learn from the experiences of other states.

Insight:

There are other large forces at work, such as skyrocketing construction costs, a shrinking population of pre-qualified contractors, a shortage of talent, and a lack of national consensus about transportation policy, that have broad-based impacts beyond ConnDOT.

Implications:

- Higher construction costs mean that delays in construction, for whatever reason, carry huge cost penalties. Building greater efficiency into project selection and management is an urgent priority.
- The shrinkage of pre-qualified contractors means that ConnDOT and the State need to pay close attention to the impact of State-mandated or ConnDOT processes on the willingness of contractors to continue to do business with ConnDOT. With the new Public Act 07-1, the newly created State Contracting Standards Board must get balanced advice from the new Contracting Standards Advisory Council and the Vendor and Citizen Advisory Panel to insure that the law actually encourages vendors to do business with the State because of fair and transparent processes, as opposed to overburdening prospective vendors with excessively bureaucratic processes.
- Talent acquisition, management, and development are more important than ever. Identifying skill shortfalls and tackling them creatively will be required. ConnDOT's leadership must make what have historically been difficult decisions to move under-performing or change-resistant managers and employees. ConnDOT's search for a new Commissioner and Deputy Commissioner, and its opportunities relative to staffing several Bureau Chief positions currently led by acting chiefs, are all opportunities to reshape the organization's talent and culture.
- The lack of a national consensus about transportation policy means that ConnDOT leadership, in conjunction with the State elected leadership, the TSB and other stakeholders, will need to craft a Connecticut-specific consensus.

Insight:

Using current revenue sources and projecting them out 10 years, Connecticut no longer has sufficient revenues to meet its transportation system needs.

Implications:

- Given the shortage of funding capability to match capacity to current and future demand, ConnDOT will need strategies to close the capacity-demand gap. It needs new kinds of thinking, and to be organized and skilled in executing these strategies.

Insight:

Even with respect to every decision ConnDOT makes to invest in maintaining or enhancing capacity, there will be 'winners' and 'losers.'

Implication:

- ConnDOT will need political and conflict management skills not previously demanded of it.

Insight:

A lack of basic leadership skills is behind many of ConnDOT's problems.

Implication:

- Because of a lack of performance management, little sense of urgency to get the job done, and a system of excessively cumbersome processes, ConnDOT's mission is severely compromised.

What The Commission Was and Was Not Asked to Do

This Commission was not asked to develop a transportation strategy for the State. That work has been ably done by the Transportation Strategy Board (TSB), which as required by Public Act 06-136 issued a comprehensive set of strategy recommendations in its January, 2007 report entitled *Moving Forward*. While the Commission received a great deal of substantive comment about how to improve the transportation systems of the State, our primary focus was on how to reform ConnDOT.

We also were not asked to develop a financing and funding strategy, although several states, including Arizona and Massachusetts, have used a commission like this one to do just that. (This report will address finance and funding issues to the degree that we believe they drive dysfunctional results and are inconsistent with the State's strategy and direction.) The Commission recommends that finance and funding issues should be addressed in the second phase of the Commission's work.

Strategy requires making choices. Once choices are made, then plans can be developed, organization structures and processes can be aligned, and talent can be acquired or developed. How to pay for Connecticut's transportation system is one of those choices.

The National Governors' Association Center for Best Practices, in a February 2007 Issues Brief on Policy Options entitled *State Policy Options for Funding Transportation*, stated that states have six broad funding strategy options:

- Tax-based strategies for increasing revenues;
- Toll and road-pricing schemes to raise revenues;
- Debt financing to reduce project development costs;
- Asset leases to raise revenues;
- Shifting transportation finance responsibilities to local governments;
- Strategies to reduce long-term growth in highway travel demand, and, therefore, long-term costs.

Our observations regarding the ultimate strategy choices are:

- Some emphasis will need to be given to motorized transport demand reduction from all modes, because it will be less expensive to implement, and, because, if successful, it will reduce future wear and tear on the highway and bus systems, and reduce future capital requirements below what they otherwise would have been. Hence, bicycle, pedestrian, smart growth and trip reduction must be an integral part of the strategy, with the appropriate champions and support resources inside ConnDOT. For a variety of reasons, public transportation is preferable to single-occupant vehicle trips, but trip avoidance, walking, or bicycling are even better than public transportation, because they reduce capital and operating costs.
- Strategic uses of information for the traveling public have to be part of the strategy, because information can improve mobility, increase the willingness of the consumer to pay more for public transportation services, and, relative to road and highway-related information, improve system yield.
- Given the criticality of maintaining the transportation assets ConnDOT has in place, it must consider a "Fix-It-First" philosophy, to insure that system preservation funding needs are met, and needs to build on its existing Asset Management Unit within the Bureau of Policy and Planning.

ConnDOT presently does not have executives with enough visibility and power inside the organization to represent either point of view. Individuals who focus on motorized transport demand reduction need to be brought into the organization if they are not there today.

Similarly, experts and champions for better information for the traveling public need to be in place. We recommend the creation of a Citizens' Representative Office, which may be a logical place for this second capability. ConnDOT leaders have tended to favor big, expensive, capital-intensive projects versus lower-cost, less-capital-intensive solutions.

Finance and funding issues are relevant to reforming ConnDOT for many reasons:

- If ConnDOT depends on federal transportation funding, decisions will be driven less by state-specific strategies and more by both the availability of federal transportation funds and their terms and conditions. This holds Connecticut hostage to federal decisions over which it has limited control and influence.
- If ConnDOT depends on year-to-year appropriations from the General Assembly, ConnDOT employees will inevitably have decision processes altered by the perceived power of individual legislators, regardless of a project's merits. The Commission is not suggesting that either the Executive Branch or the General Assembly relinquish accountability or engagement on transportation issues, because these issues are vital to the State's quality of life and competitiveness. However, ConnDOT should be engaged in a constructive partnership with the State's elected officials, driven by strategic and operational needs, not the fear of losing funding in the next appropriation cycle.
- Continuing the growth of bonding as a strategy will eventually weaken the state's financial flexibility to fund new initiatives.
- The uncertainty and instability of funding sources is a reason why contractors all over the country are withdrawing from public sector transportation work, according to a 2006 Federal Highway Administration Study. This results in an increased percentage of single-bid or even no-bid contract solicitations. If ConnDOT has a reduced number of pre-qualified bidders, it will pay more, get lower quality service, and have less bargaining leverage.

How the Commission Gathered the Information and Came to the Recommendations Contained Herein

The Commission conducted four meetings at which members of the public could testify, in Hartford, Stamford, New Haven, and Bridgeport. It held four other public meetings. The first was on July 17, 2007, and the last was on January 18, 2008. We also invited specific individuals to testify, and specifically received reports from each of the five ConnDOT bureau chiefs or their designated representatives. In addition, we received hundreds of emails, through both a web site and through email traffic to commissioners individually. We received countless letters and memoranda. We met with legislators and town officials. We had many one-on-one meetings with interested parties, and we consulted with knowledgeable individuals from outside Connecticut, including present and former commissioners of other states' departments of transportation. We also undertook a confidential survey of ConnDOT employees, in which 63% of the employees participated, and we took a survey of the qualified ConnDOT vendors, in which 50 out of 200 participated. At every Commission and working group meeting, we had public attendees, and at most meetings, we responded to questions from the attendees.

The Commission wants to thank many people, particularly the leaders of staff of ConnDOT, and, especially recently retired DOT Commissioner Ralph J. Carpenter, who was exceptionally cooperative and who caused his entire staff to work cooperatively with us. We also want to thank Department of Administrative Services Commissioner Ann Gnazzo and her staff for preparing and compiling the results of the Organizational Assessment Survey, the findings of which are presented later in this Report. The following were most helpful to the Commission's work: The staff at the Office of Policy Management (OPM), particularly Under Secretary Philip L. Smith; Policy Development Coordinator at OPM, Susan Simmat; ConnDOT Director of Communications Judd Everhart and his team; and Transportation Strategy Board Manager Robert Hammersley. We also want to thank those stakeholders who took the time to prepare written and oral testimony. We found their comments exceptionally constructive.

This report has three parts:

- Part 1 is designed to provide the context and environment in which the Connecticut DOT operates;
- Part 2 identifies a number of major themes derived from what we learned from a broad group of stakeholders; and
- Part 3 consists of the working group reports and recommendations.

Part 1: The Context and Environment in Which ConnDOT Operates

In this section, the Commission will identify stakeholders that affect ConnDOT's ability to accomplish its mission and goals. The purpose is to describe both areas of constraint and freedom of action.

ConnDOT, like other State agencies, operates in an environment in which conflicts and obstacles to accomplishing its objectives are often inevitable. Many public policy experts have commented that it was far easier for President Eisenhower to achieve a national consensus on constructing the national interstate highway system 50 years ago and to get states to build that system than it is for any national or state transportation authority to get anything done today. (See, for example, Alan Atshuler and David Luberoff, *Mega-Projects: The Changing Politics of Urban Public Investment*.)

Virtually every ConnDOT project results in some conflict that must be addressed because:

- Environmental issues are more of a constraint on transportation capacity expansion than ever before. The National Environmental Policy Act of 1970 (NEPA) began this process by requiring environmental impact statements for any major federal action significantly affecting the environment, including federal funding of major transportation projects. For example, there is the protracted battle over the proposed "Super 7" highway in southwest Connecticut. The environmental issues ConnDOT must take into account today are more varied and complex than ever, including concerns about air pollution, wetlands, endangered or threatened species, coastal management, storm water run-off, disposition of hazardous materials used in construction, recycling, and, more recently carbon emissions.
- Almost all transportation projects today are in densely populated, fully built up areas. More cars, suburban sprawl, employment growth, and greater wealth tied up in real estate and specific businesses locations all resulted in more negative economic impact from even positive changes to the transportation footprint.
- Public involvement in transportation projects has become a more explicit requirement in federal law. In fact, the Federal Highway Administration felt it necessary to issue a lengthy and detailed set of guidelines on how entities planning transportation projects should deal with the conflict that would inevitably occur: the Federal Highway Dispute Resolution Guidelines, issued in 2002.
- There are more sophisticated, better organized, and well educated community activists and more legally available ways to stop projects or delay them than ever before.
- There are two main types of uses of the road systems, and the demands made by the two different kinds of users are sometimes very different, or even conflicting. Additionally, residents and businesses in areas adjacent to the highways and roads have a third set of interests. The State's highways and roads are used by motorists driving themselves and/or passengers from one place to another, and by buses carrying passengers. Those same highways and roads are used by trucks picking goods up from someone and/or delivering them to someone else. The biggest change in the past few decades, relative to the use of deliveries from suppliers to customers by trucks, is that there is more of a just-in-time economy, with a need for more precision and predictability in travel times than ever before.
- Many Connecticut towns are adjacent to major highways, with some roads owned by the State, and others owned by the towns. Local roads are sometimes used for parts of longer-distance trips, especially when there are unexpected highway traffic delays, particularly roads like U. S. Route 1, which passes through many Connecticut towns and cities, and extends from Maine to Florida. Likewise, the highways are used by town residents as if they were local roads, especially when the local roads are more congested. These uses conflict with one another, especially when a "smart growth" strategy would dictate that some local roads be closed off to vehicular traffic to encourage more pedestrians and bicycles.

- Similarly, with respect to rail station parking in heavily built up areas in towns and cities, commuters want more parking for commuting and merchants want that same parking area for retail shoppers. According to the 2005 report “Transportation in Connecticut: The Existing System,” towns also have reason to oppose public transportation station expansion relative to creating more parking lots or garages dedicated to commuters. The report stated “local concern about losing taxable property to public transit use has been expressed.”
- Connecticut has a number of transportation assets owned and operated by municipalities, by units of municipal government, or by private citizens.

Thus, not only is capacity expansion more challenging, the alteration of existing transportation systems is also more challenging. Even the smallest alteration of a transportation system in a single town can create winners and losers, and can significantly alter the flow of traffic, the attractiveness of multiple locations, and the financial viability of multiple businesses.

The implication this has for ConnDOT is that the Department needs a level of communication, public outreach, and negotiation skills never required before.

ConnDOT operates under many sets of rules and constraints from outside Connecticut.

Our State obtains a relatively high percentage of its funds, 71%, from federal sources, far higher than the national average of about 28%. In fact, one statement in ConnDOT’s core mission and goals statement is that it will strive “to obtain all available federal and state dollars.” This is not surprising, because ConnDOT has always been relatively successful in securing federal transportation project money.

But federal transportation funding contains detailed allocation and spending constraints. Additionally, the U.S. DOT conditions the federal grants on terms unrelated to the uses for which the grants were requested. One classic example was described in ConnDOT’s 2007 Master Transportation Plan. ConnDOT lost the ability to access some federal highway funds after 2003 until the State enacts “open containers” legislation consistent with Federal Highway Administration rules. That legislation prohibits open alcoholic beverage container within reach of a driver. In the absence of such legislation, ConnDOT must spend a portion of its federal funding on safety enhancement.

The regulation created a perverse incentive for proponents of spending on the approved categories of transportation safety to oppose the otherwise meritorious “open containers” legislation, because without it, they had more dedicated funds to spend on their own particular priorities. This legislation still has not been enacted, so Connecticut continues to lose the flexibility on how it spends some highway dollars.

ConnDOT carries additional work responsibilities to comply with federal government information and audit requests. For example, in October 2007, the Federal Highway Administration, pursuant to Section 1201 of the 2005 SAFETEA-LU transportation legislation, issued a regulation requiring that to qualify for federal funding, the state must have systems for measuring traffic volumes, speeds, and delay factors for construction work zones. Federal regulations govern how the federal funds must be spent and accounted for, and how the federal government may audit and investigate ConnDOT projects.

Moreover, the nature and complexity of federal funding has radically changed over the past two decades in four respects:

- Federal transportation funding is parceled out among the states from more specific and detailed programs with more detailed, customized requirements. The Stamford Urban Transitway received \$80 million in federal funds from multiple federal programs. The Commission does not specifically endorse earmarks as a major source of transportation funding, as was the case in the Stamford Urban Transitway project, but that project illustrated the need for ConnDOT to be more innovative in tapping funding sources for individual projects.

- The federal government has decided that its transportation funding should primarily go to capacity enhancement, not to renovating existing capacity. Because Connecticut was one of the first states to build its interstate highway system, and because that system is over 50 years old, the skill sets required to find federal dollars are more critical than ever.
- More federal transportation funding opportunities require the states to compete against other states for available money. We question whether Connecticut has sufficient dedicated Washington-based resources to compete effectively. Experts believe that federal transportation funds will become even more competitive with the combination of federal budget deficits and the looming battle over transportation funding resulting from the 2009 reauthorization of the federal transportation appropriations.
- There are more experimental, demonstration, or pilot transportation funding project opportunities, so states have to be more creative in defining projects that meet these criteria.

Although obtaining federal transportation funding will be more challenging, there are many potential funding sources that can be accessed more than ConnDOT has to date. ConnDOT needs a dedicated resource in Washington D.C to find, negotiate, and obtain federal funding sources from agencies such as the Department of Homeland Security, the Department of Health and Human Services, the Environmental Protection Agency, and even the Department of the Interior. Acting Commissioner Emil Frankel, who has significant and recent experience with the U.S. Department of Transportation, will be able to identify these funding sources, and help the State access them.

Besides the obvious involvement of the U.S. DOT, ConnDOT interacts frequently with the U.S. Department of Homeland Security, particularly with respect to ConnDOT's airport operations. It also has to address U.S. Department of Environmental Protection rules and guidelines on such issues as highway construction impacts, waterway dredging, and noise regulations relative to airport activity. Also, the state of Connecticut is a "moderate ozone non-attainment area" under the federal Clean Air Act amendments of 1990, which require it to coordinate transportation projects with New York and New Jersey, which also have similarly classified counties. There are specific federal Environmental Protection Agency requirements for what ConnDOT must do if it wants to add capacity with the potential to increase ozone levels. ConnDOT must increase significantly its level of interaction with New York and New Jersey on a wide range of issues to coordinate their strategic transportation plans.

ConnDOT also operates transportation assets that require it to communicate frequently with officials from other states. The most notable examples are the Metro-North Commuter Railroad Corporation ("Metro-North," a subsidiary of New York's Metropolitan Transportation Authority), and Amtrak, the interstate passenger rail corporation owned by the federal government. Metro-North operates the New Haven commuter rail line under a long-term contract. Amtrak also has rights to use the tracks for its northeast corridor passenger service.

At the other end of the State, the Bradley Board of Directors actively markets its airline services to a market area that goes slightly beyond Springfield, Massachusetts.

ConnDOT owns and operates roads like I-95, I-84, I-91, State Route 15 (called the Wilbur Cross Parkway northeast of the Housatonic River, and the Merritt Parkway southwest to the New York border, where it meets the Hutchinson River Parkway) and U. S. Route 1, that go through other states. Decisions made in those states have a profound effect on the volume, nature, and timing of Connecticut traffic flows. One example is the level of gaming activities or other high-traffic-generating economic development initiatives in neighboring states. Our State cannot operate as if it is in a vacuum in its transportation planning.

ConnDOT described the transportation planning efforts in other states in its report "The Existing System," but it is not clear how much coordinated planning actually takes place.

The Metro-North Service Agreement

One of the more challenging issues Connecticut faces is the need to work with an out-of-state rail service provider to manage a rail network with approximately one-third of its length outside Connecticut, and its southwestern terminus in New York, controlled by Metro-North's parent, the Metropolitan Transportation Authority.

The agreement is complex. Many would say that it is unbalanced in Metro-North's favor. Historically, that imbalance is heightened by Connecticut's dependence of Metro-North in the areas of operational oversight, capital planning and programming and rail policy.

Metro-North operates an integrated facility at Grand Central Terminal in New York City. While ConnDOT would have the right to continue to operate at Grand Central if it were to fail to renew the Metro-North Service Agreement, we would not recommend that ConnDOT attempt it. Trying to split responsibility for the Grand Central Terminal component of the New Haven Line is importing more complexity to ConnDOT's operations. Therefore, we do not recommend that ConnDOT seek out another arrangement for operating the New Haven Line at this time.

The TSB recommended in its 2007 Report that ConnDOT seek a voting seat on the Metro-North Board of Directors. While that is a good short-term solution, we believe that ConnDOT needs to consider proposing to Metro-North a different kind of operating agreement that would enable the Metropolitan Transportation Authority (the MTA, Metro-North's parent entity) – and ConnDOT to have a more dedicated focus on the New Haven Line. Perhaps, a 50-50 joint venture between the MTA and ConnDOT to manage the New Haven Line, which separates management of the New Haven Line from the other Metro-North rail lines, would make sense when the current Operating Agreement reaches a renewal point.

ConnDOT also operates with constraints resulting from dealing with other stakeholders inside Connecticut.

Even within Connecticut, ConnDOT deals with many other state and local agencies:

- The Department of Environmental Protection issues all environmental permits required for ConnDOT projects.
- The soon-to-be-created State Contracting Standards Board, created by public law 07-1, passed during the 2007 Special Legislative Session, will oversee all major state contracts.
- The State Traffic Commission, which is jointly led by ConnDOT, the Department of Motor Vehicles, and the Department of Public Safety, plays a major role in deciding whether new projects will be major traffic generators.
- As noted above, the legislature created the TSB, which has defined the broad-based transportation strategy for the State and the way in which that strategy must be integrated with other State goals.
- More recently, Governor Rell has created a responsible growth initiative in which ConnDOT participates under Public Law 07-239, enacted during the 2007 regular legislative session.
- As the TSB Report indicates, many key transportation assets, such as the municipal airports like Tweed-New Haven, and many bus lines, are not owned operated, or controlled by ConnDOT, but there are significant contractual relationships between these assets and ConnDOT.
- By law, transportation planning is shared with regional Metropolitan Planning Organizations, which are aggregations of town government officials in each region, as well as regional planning agencies like the Southwestern Regional Planning Agency in Southwest Connecticut. There is an elaborate bottom-up planning process, as well as a robust public outreach process to which ConnDOT must adhere before it can take any action on any projects. This is described in great detail in an October 2005 Report entitled "Transportation in Connecticut: the Planning Process."

Even in transportation areas in which it has primary responsibility, ConnDOT deals with a broad group of stakeholders.

There is a specific zone of ConnDOT responsibility, yet even within it, responsibility is highly fragmented:

- The primary rail asset, the New Haven Line, is operated by Metro-North, although ConnDOT owns the tracks, the overhead catenary lines, the platforms, and the stations.
- ConnDOT has leases in place for most of the parking areas adjacent to the train stations, and, as a 2005 Rail Station Governance Study conducted by Urbitran Associates points out, these leases range from highly specific documents to highly informal oral agreements with little, if any, definition of responsibilities. We recommend that ConnDOT achieve much greater control over these assets, that it standardize the parking rules, and that it attempt to create a regional parking network to attempt to get parking areas fully used every work day. ConnDOT is not currently equipped to take over complete control of all parking facilities, although integrated operation of the stations and parking areas is critical for future success. However, it should accelerate the process of taking operating control of the parking areas, and should make sure that it has a methodology for addressing the concerns of the towns as it is assuming operating control of the parking areas. Critical to making this accelerated operational control workable is having the Commission's recommendation accepted relative to assigning a specific senior ConnDOT executive accountability for management of relationships with the towns.
- ConnDOT's programs to reduce demand on the highways to encourage ride-sharing, van-pooling, use of transit programs, and techniques to avoid single-occupant-vehicle commuting are all outsourced to three regional ride-sharing agencies: Metropool, Rideworks, and Rideshare. Clearly, this fragmentation of responsibility and service delivery does not help ConnDOT deliver on its mission.

ConnDOT has been handicapped by previous decisions made by State officials.

Although Governor Rell and the leaders and members of the General Assembly have a strong commitment to improving transportation and supporting ConnDOT today, ConnDOT is still suffering from decisions made in the past.

- Voluntary buyout programs directed by the previous administration resulted not only in total staffing reductions of several hundred ConnDOT employees, but a loss of talent in key job categories like engineers and inspectors, the employees who actually deliver the services that affect citizens. For example, the number of staff engineers declined from 430 in 1997 to 314 in 2007. The Commission does not recommend specifically that ConnDOT increase the staff to get exactly back to 1997 levels, because as ConnDOT rebuilds its staffing, it must use technology improvement and process re-engineering to reshape how it does work, and it must import new skills into its operations. Given its workload, ConnDOT needs to target a higher headcount, but with skill sets matched to future needs rather than skills lost from those who left before. The talent assessment must be done as quickly as possible, as well as the process for assessing what should be done in-house versus outsourced, as required by the new Clean Contracting Standards Act.
- ConnDOT's ability to use finance and funding vehicles to increase its capacity has been handicapped by the decision to reduce gasoline taxes from \$.39 to \$.25 in the 1990's. This reduction cost the State more than \$1 billion of transportation bonding capability. While the State added a gross receipts tax to finance the acquisition of rail assets two years ago, the additional funding is still not sufficient or sustainable. Sustainable funding sources to supplement the energy usage based taxes now in place will have to be found.
- For significant periods in the several decades prior to Governor Rell's administration, the State chronically under-invested in maintaining and upgrading the State's transportation network, now one of the country's oldest. The Commission received a considerable amount of testimony, most eloquently from the Tri-State Transportation Campaign, urging the State and ConnDOT to adopt a fix-it-first philosophy in allocating its transportation resources and priorities. The Commission agrees, as would ConnDOT's leadership, but the resources have to be available even for this less ambitious use of ConnDOT assets. Today, ConnDOT has an Asset Management Unit within the Bureau of Policy and Planning, which is a step in the right direction, but the function needs to be enhanced in size to enable ConnDOT to ensure that it can maintain transportation assets as required.

- The State discontinued the use of tolls in the 1980's and, until recently, has refused to consider reinstituting them. The 2007 TSB Report recommended that the State "undertake a comprehensive review and analysis of electronic tolls and congestion pricing as a means of both managing transportation demand and raising revenue." The TSB also reaffirmed its recommendation at its December 19, 2007, meeting. We support the TSB's recommendation. If the State does not authorize reinstituting tolls, it still has the fundamental problem of being unable to fund the transportation work needed. The work led by OPM Secretary and Commission member Robert Genuario could help identify strategies to close or eliminate this funding gap.

The combination of a severely understaffed and under-skilled transportation department in certain critical skill areas, an aging infrastructure, no tolling system revenue stream, and an energy-usage-based tax funding mechanism is a unique combination relative to that of any other state. The State reached this point through the cumulative effect of decisions made by many elected and appointed officials. The public must be realistic about the ability of any ConnDOT leadership team to overcome this combination of problems without significant support from the State's elected officials.

The cumulative effect of many separate government action has been to make ConnDOT slower to act and to make its projects more expensive.

We live in a democratic system in which public servants are subject to checks and balances to curb abusive and corrupt behavior. When corruption surfaces, as it did in the early part of this decade, the public demands tighter scrutiny and more control over government behaviors. These controls range from more financial disclosure statements, more audits and more prohibitions on campaign contributions to elected officials, to more project-level reviews and contract controls. The State Contracting Standards Board will expand public oversight requirements.

The cumulative effect of these requirements is that they add bureaucracy, which costs money. They also risk reducing the population of potentially qualified vendors, which lessens competition; they increase the risk and cost of doing business with the State, which increases the price of bids; and they add time to projects.

Additional time to get a project underway is a hidden inflation driver. Over the past few years, the cost of basic commodities essential to transportation construction projects has skyrocketed. The 2006 escalation assumption on construction projects for Connecticut is 10%, but actual construction costs may increase far faster than this.

Connecticut is not unique. New Hampshire DOT publishes a construction cost index, which has increased by 51% a year since 2002. Washington state DOT has published a series of graphs showing increases in asphalt, steel reinforcing bar, structural steel, structural concrete, and hot mix asphalt increasing from a low of 70% (structural concrete) to a high of 160% (structural steel) over the past five years. The 2006 Federal Highway Administration Survey indicates that 42 of 47 states that responded indicated that they were experiencing issues from increased construction material costs far in excess of the Consumer Price Index.

To the degree that controls that make our processes less susceptible to corruption, unfairness, and abuse are not properly administered, they may result in the State's paying far more than it did for the same work five years ago. We are not recommending that the State dismantle or roll back these processes, but the cost-benefit decision today is far different than it was in the past. If Connecticut experiences construction cost increases like those in New Hampshire over the past five years, every month of delay adds over 4% to construction costs.

The problem arises from the distrust of ConnDOT's ability to manage its affairs, which then causes the State to create processes additional to those which exist today. The combination of these cumbersome processes, which compensate for the lack of trust in ConnDOT and the cost inflation that results from process-driven delays, means that cost escalation happens on many projects. The cost escalation causes the citizens, the government, and other stakeholders to distrust ConnDOT even more, which leads to even more oversight process.

We strongly urge the State Contracting Standards Board to receive feedback on construction cost escalation trends before it finalizes its decisions on contracting processes.

However, the Commission recommends that every process be mapped and analyzed to find a way to eliminate unnecessary work, and to shorten necessary processes. ConnDOT will ultimately lose the ability to do the basic work the State needs if its processes are not significantly streamlined.

Part 2: What ConnDOT Can Do That Is Within its Control: Major Themes

So far, this report has attempted to point out what ConnDOT needs help to do. ConnDOT operates in an environment in which its ability to accomplish its goals is heavily constrained by others. There are also steps that are within ConnDOT's control, or that the Governor and the General Assembly can reasonably authorize ConnDOT to do.

Here are broad themes from the comments the Commission received, as well as reports we reviewed. Although we had four major sets of recommendations in the Executive Summary, we will touch on a broader number of themes in this Part to give more in-depth analysis of the rationale for the recommendations.

Theme 1: The need for a culture of broad-based collaboration with stakeholders

ConnDOT has elaborate and detailed processes for working with planning organizations and doing public outreach, and it appears to comply with those processes. So how could ConnDOT work so hard to receive public comment and yet have been so unsuccessful in appearing to be open to public feedback?

There are two key root causes of this perceived insularity:

- ConnDOT is an engineering-driven culture, with little understanding of how to market to the public and how to communicate what it is doing.
- ConnDOT employees do not have well developed conflict management skills, so they are particularly uncomfortable communicating and receiving feedback in a situation in which there are clear winners and losers, or in which well-entrenched interests each seek total victory. ConnDOT needs high-level negotiation and mediation skills to resolve conflict issues, skills largely lacking now. Altshuler and Luberoff, in the *Mega-Projects* book, point out that in most public investment projects, mitigation or compromise agreements must be hammered out with many stakeholders. The major central artery/tunnel project in Boston (the "Big Dig") involved more than 1,500 separate agreements to enable the project to proceed. We are not endorsing the results achieved in the Big Dig project, because it resulted in cost overruns and technical problems, but it has been cited as an example of how to assemble support to get a big project underway by enabling government officials to work with diverse stakeholders. While ConnDOT has no project this large, every sizable project requires ConnDOT to negotiate satisfactory resolutions with many stakeholders and to have a caring dialogue with others it cannot accommodate, something it does not appear to be able to do. If ConnDOT cannot negotiate effectively with stakeholders and gets projects underway, the cost of those projects will escalate so fast that any legislative approvals will be obsolete before project commencement, because approved funding will be insufficient.

In effect, the problem is not lack of public input. ConnDOT has some robust methods for collecting that input. Most stakeholders believe that the input does not receive meaningful consideration, and that, while Commissioner Carpenter set a much more responsive example during his tenure, there is an institutional culture of ignoring public feedback. Moreover, ConnDOT's method of receiving input is to solicit that input in connection with specific projects. It does not regularly engage the public by conducting broad, periodic surveys to determine the public's degree of satisfaction with ConnDOT's delivery of services, or to determine the public's sense of priorities regarding future transportation investments. Others states, such as Oregon, regularly conduct such surveys.

Beyond the issues relative to broad public input, ConnDOT is perceived to be insular and unresponsive:

- In the recently concluded employee survey administered by the Department of Administrative Services, most ConnDOT employees said they were kept in the dark as to what management was deciding. ConnDOT fundamentally needs to get buy-in for its mission, strategy, and plans from all levels of employee, and to work collaboratively across the entire organization, including with the unions representing ConnDOT employees.
- Those who do business with the State are also unhappy with what they perceive to be decision making insularity. They perceive that ConnDOT does not treat them as partners. Creating an exceptionally onerous process for vendors creates a risk of more sole source or even no-bid contracts.
- The public could be of great help in self-managing traffic and transit congestion through more active participation in alternative commuting programs, in feeding information to ConnDOT and to one another to supplement camera-based technology, in identifying problems interfering with traffic flow or creating risks of accidents or other incidents and in providing useful input on transportation strategies, priorities, plans, and projects. Mayor Michael R. Bloomberg of New York City has created a “311” telephone number for citizen self-reporting of highway conditions. New Jersey has a “*77” call-in system to report reckless drivers. The public could be a far greater supplementary resource than ConnDOT has enabled it to be. Both technology and the development of ConnDOT infrastructure and process to leverage public support would contribute more to a culture of collaboration.

One effective way to receive and process public feedback is to have an office designated to fulfill that role. We recommend that ConnDOT create a Citizens’ Representative Office to communicate actively on a timely basis with citizens, to act as a conduit for public information to make ordinary citizens a part of ConnDOT’s decision-making process, and to manage any conflicts between ConnDOT and its many stakeholders. This office would receive public feedback on transportation issues, and on how well or poorly ConnDOT is fulfilling its mission. It is important that this office establish and publish a service standard for handling public complaints and comments, so that citizens have an expectation for when their issues will be responded to. This service standard and appropriate staffing levels should be determined through benchmarking.

With any transportation project, there inevitably are stakeholders with conflicting goals. The senior executives assigned responsibility for management of stakeholder relationships could also play a significant role in helping manage and resolve stakeholder conflicts.

Theme 2: The need for a culture of accountability for results aligned with ConnDOT’s mission and goals and the State’s transportation strategy

The Commission heard repeatedly that ConnDOT has a mission and a set of goals, and the TSB defines a transportation strategy. But the alignment between the mission and strategy on the one hand, and the day-to-day activities of ConnDOT managers and employees on the other hand, is insufficient.

There are many explanations as to root causes:

- Many said that, while it is understandable that the mission and strategy are decided partially outside ConnDOT or, if within ConnDOT, at a high level, ConnDOT has insufficiently engaged front-line employees to draw upon their knowledge, experience, and passion.
- Many also said the ConnDOT bureaucracy is highly change-resistant, and, therefore, would continue to do whatever it wanted, regardless of the mission and strategy. The new Commissioner and his or her senior team must not only be role models for accountability, but have rigorous performance management processes to which the organization strictly adheres, to make sure that change-resistors are identified, counseled, and, failing to change, asked to leave their positions.
- Many said that even if ConnDOT decided to follow a specific set of strategies, intervention from elected officials not based on the merits of a strategy or a project have altered priorities. Employees and other stakeholders perceive that power politics trumps strategy. There are constructive political interventions,

and those based solely on parochial, non-strategic interests. During interviews with both present and former ConnDOT employees, we heard more than once about a story of the Public Transportation Bureau's attempt to close a bus line that carried only three people a day, and being prevented from doing so by a powerful legislator. While we do not know the details of this case, it is clear that ConnDOT officials do not know how to address this kind of situation with sensitivity to local concerns, while doing what is strategically in the best interests of the State.

- Many, including individuals who are or were part of regional planning organizations, said that, even when ConnDOT has a strategy, it ultimately reorients its priorities based on where money is most readily available. If a certain project could be done sooner, and money was available, then the project would get done, even if it had a low priority. The perception is that funding availability stimulates ConnDOT's historic tendency to be a project-driven organization.
- The perception is that too many ConnDOT employees are wedded to their specific tasks, not to fulfilling their organization's overall mission. ConnDOT lacks clearly articulated performance measurement and evaluation metrics consistent with a mission or strategy. Compare this with Missouri's performance tracking system as illustrated in Appendix 3, which lists an objective, identifies a specific responsible executive within its Department of Transportation, and even identifies a person responsible for the measurement of performance. Also compare ConnDOT's web site with the Virginia DOT web site, which not only identifies key metrics and their progress over time, but presents forward-looking performance targets (See Appendix 4).
- Suggesting improvements to align the organization better to a mission or strategy is considered high risk and low reward. The employee survey considered that to be one of the worst features of working at ConnDOT. We heard testimony about a "culture of fear" in ConnDOT. We have to believe that one of its manifestations is the fear of proposing or suggesting improvements.

There is nearly universal agreement that ConnDOT needs to lead the dialogue on a set of priorities consistent with the strategies the TSB adopted and the Governor and General Assembly endorsed, and to pursue them consistently over a multi-year period.

A culture of accountability will have a profound effect on ethics issues. If ConnDOT employees do not feel that they own problems, that they are responsible for results, and they are accountable to citizens for the effective operation of the transportation system, then the corrosive effect of corruption is more likely to seep in and stay.

Theme 3: Need for a Culture of Transparency

The Commission heard from many different sources in many contexts that ConnDOT decision-making, the way it uses money and human resources, and the results of its activities are not transparent.

The perception is that the contracting process and the criteria for qualified vendor selection both lack transparency. The Commission believes that a culture of transparency in which contracting processes identify decision criteria with clarity and consistency is essential to both the reality and the perception of ethical standards. The more every process and every decision are continually exposed to public view, the lower the likelihood that there will be corruption.

Transparency starts with ConnDOT's rationale for selecting certain projects and deferring others. As we discussed in Examples 1 and 2, ConnDOT's strategy implementation process is not transparent today, even if its input-gathering process is.

ConnDOT's spending patterns and its processes for paying vendors lack transparency. The public needs to know in a clear, broadly-communicated, easily understood way what is happening in all phases of projects and how the project is doing relative to budgets and appropriations. For example, Connecticut is in a small minority of states that does not publish a bidders' list. The status reports on projects published on the ConnDOT web site are relatively sketchy. Other states are highly transparent in reporting on their performance relative to stated goals.

Oregon publishes an Annual Performance Progress Report, which, among other items, reports on the Timeliness of Projects Going to Construction Phase. Additionally, Oregon relates its goal to its overall strategy, and identifies a specifically accountable executive in its progress report. (See Appendix 5).

One example of applying the principle of transparency to a DOT web site can be found in the State of Washington (See Appendix 6). Prominently displayed on the home page of the Washington State DOT is a box labeled “Accountability.” It links to two pages, one of which is labeled “How are we doing?” and the other of which displays the Department’s financial information.

The “How are we doing” link includes a downloadable so-called Gray Notebook, produced quarterly, which includes more than 100 pages of updates on transportation projects, including status, cost, any problems, management issues, safety records, and much more. The financial information link provides information on the biennial budget request; various funding and tax packages; financial plans; and a revenue forecast.

No such transparency is provided on the ConnDOT web site.

Washington’s home page also includes timely information about emergency repairs, road closures, and other news of interest to the traveling public. A real-time map of the Seattle area shows traffic congestion (See Appendix 7).

ConnDOT’s web home page, by comparison, is more bureaucratic than traveler-friendly, and it displays little if any transparency (See Appendix 8).

An issue that surfaced recently and became a flashpoint for criticism of ConnDOT by many elected officials was the lack of transparency on the cost overruns related to the maintenance facility being constructed to house railcars to be delivered to the New Haven Line beginning in 2009. Many legislators said they were bewildered by how a project estimated to cost around \$300 million could cost substantially more. The process of getting from \$300 million to a much higher number was not transparent. This would probably be one of the useful types of transparency, one which communicated in real time the impact of decision-making delays on the cost of a project.

The bigger transparency improvement opportunity is to communicate continually the growth or shrinkage in the funding gap the State faces between having funds sufficient to put the transportation infrastructure in a state of good repair and the funds expected to be available – a gap discussed in the next section. This gap should be continually posted on the web site, not just included in a lengthy report accessible by going to a second or third level web site menu. The Transportation Master Plan is a 384-page document, and it is an excellent piece of work in terms of presenting important facts and issues. But the time to access it discourages all but the most die-hard transportation student. As Osborne and Hutchinson wrote in *The Price of Government*:

“Leaders who want to enhance the credibility of their budgets should publish their projections, in user-friendly form, to enhance public scrutiny.” (p.37)

Additionally, information about congestion and other metrics of interest to the public are collected, but not published in a way that the public can easily track it.

To make a system and its activities transparent, there need to be agreed-upon priorities for which information will be presented at what level of detail. Everything has to be available for public scrutiny, and we need a better educated interpretive capability in our major news media. But, for the public, ConnDOT needs to select a smaller number of critical facts and make sure those are communicated simply, accessibly, and frequently. ConnDOT’s web site needs to have what the public would consider most important at the easiest-to-access screens.

Transparency requires structured and selective presentation, content simplicity and repetitiveness to help the public absorb the message.

Flooding the public with huge volumes of material in huge numbers of documents is not transparency. It is more like e-mail spam, and the recipient tunes it out.

Theme 4: The need to have a culture focused on delivering measurable results consistent with ConnDOT's mission

This significantly overlaps with Themes 2 and 3, but it is important to note in its own right. There is an old saying that “What gets measured gets done.”

Even if ConnDOT were fully aligned with its mission and strategy, and even if its activities were transparent, it needs to continuously measure performance, report continually on it, and set out measurable improvement goals for the future.

Many states have continuously-updated gauges shaped like those on auto dashboards published on the Virginia transportation department web site. States like Missouri, Oregon, North Carolina, Ohio, Virginia, Washington and Iowa, among others, have specific, measurable performance targets on their web sites, and they update those periodically.

ConnDOT appears to have a culture focusing on completing tasks, as opposed to delivering measurable results. Lacking in both the 2007 Master Transportation Plan and the 2004 Long-Range Plan are specific short-term, medium-term, and long-term metrics that would define success. There are a few metrics, but more often not, deliverables are specified more in terms of completing work, as opposed to delivering a specific level of mobility, safety, or even smart growth.

Theme 5: The need for a culture of prioritization in an environment of resource scarcity

This state has a number of transportation system deficiencies, and has an increasingly large gap between what the system needs and what resources might be available.

The state has a spending cap and finite taxing capacity. Transportation will continue to compete with many other worthy causes for tax dollars. Federal transportation funds are not likely to increase over time, although other sources of federal funds are available. In fact, in its “Existing System” report, ConnDOT describes in highly technical fashion (pages 34 to 38) why federal transportation funding may not grow. The goal of both the 1998 and 2005 omnibus federal transportation laws was to evolve toward greater equality between what states contribute and what they get back. Because Connecticut had always been able to get more than it put in, Connecticut would lose relative ground in an equalization process, although it has not yet lost in absolute dollars.

In the 2007 Master Transportation Plan, (page 19), ConnDOT points out that there is a \$3.27 billion gap between projected and needed revenues. This gap does not include an adjustment for inflation, which, at this stage, is running well in excess of the Consumer Price Index. It also does not include the capital needs of the State's maritime facilities or systems. Most important, since Connecticut has insufficient highway or public transportation capacity, it also does not include funds needed for capacity expansion. Moreover, even if money were freely available, ConnDOT has had insufficient human capital available to prepare designs that would allow it to propose projects and get them funded. The Commission received testimony that ConnDOT used to have the capability to prepare projects and put them “on the shelf,” so that when funding became available, they could move quickly. Resources that allow for that pre-planning are insufficiently available today.

The deep-seated structural issues described in this document cannot be fixed all at once. The art of leadership is described by business author Peter Drucker as the ability “to get the right things done.” Andy Grove, one of the 20th century's top business leaders, said that leadership is the art of selecting from among a number of good actions, the one or two highest-impact actions.

Whether it is the spending of scarce resources, the deployment of existing employees, the decision about which talent gaps to fill first, the decisions as to what process changes to tackle first, the Governor and ConnDOT leadership – with the collaboration of its employees – need to decide on priorities and execute relentlessly those priorities. In a public, politicized environment, that is far more difficult than it is for a business or a non-profit. However, the

ConnDOT leadership needs to communicate broadly what the organization's strategic priorities will be, and to use the leadership techniques described later in this report to reinforce those both within and outside the organization.

The 2004 Long Range Plan lists the state's strategic goals and a long list of projects consistent with those goals, but it fails as a true strategy in three respects:

- Because the strategic goals are unattainable with the limited ConnDOT resources, there is no attempt to prioritize them;
- There is no explicit linkage between the projects and the goals, and no attempt to indicate why these projects were selected as the best ways of achieving these goals; and
- The goals contain no metrics against which success can be determined.

Contrast this with the Ohio Department of Transportation 2008-2009 Business Plan (<http://www.dot.state.oh.us/2008%2D2009BusinessPlan/>), which acknowledges the challenges of funding scarcity, identifies strategic priorities, and spells out the action plans and the goals to achieve those priorities.

As Osborne and Hutchinson commented: *"Any significant change in the price of government is impossible until the majority of Americans feel they are getting real value for their dollars."* (p.37) ConnDOT, like Missouri (see Appendix 3) needs to have a specific focus on establishing the value of the work it is proposing, relative to other potential uses of those funds.

Relative to what those priorities might be, ConnDOT should build on areas in which it has been successful. ConnDOT has been successful programs for being efficient in maintenance and repair processes, and in reducing both the duration and the frequency of incidents that create unpredictable delays. Given the popularity of the CHAMP program, as we mentioned in the early part of this report, safety enhancements and incident management appear to be natural priorities on which to build. Programs focused on safety produce three benefits:

- They reduce the number of fatalities and injuries on the roads;
- They reduce the frequency of incidents that cause unpredictable delays; and
- They make the driving experience less stressful.

Reducing unpredictable delays is a particularly high priority, because in this just-in-time economy, predictability is valued even more highly than reduction in average travel time. One study, National Cooperative Highway Research Program No. 431, states that a minute lost to unpredictable delays (such as those caused by accidents) is seen by drivers as being 2.5 times worse than a minute lost to predictable delays, such as congestion.

ConnDOT also needs to address the priorities which are most urgent, such as the deficiencies in its bridges, particularly the railroad bridges, and to give a high priority to a Fix-it-First strategy, particularly in areas that are heavily built-up. There may be areas, such as I-95 east of New Haven, or I-84 west of Waterbury, where selective capacity expansion may be the highest priority strategy, but in the built-up parts of the State, preserving existing capacity must take priority.

This brutal reality to make choices needs to be communicated regularly with the public. ConnDOT leadership needs to state explicitly what it is choose to do and not do, and what these choices mean. This approach will also contribute to a culture of transparency.

The level and nature of public engagement today through ConnDOT does not adequately provide for the kinds of difficult decisions that must be made.

Theme 6: The need to use innovation and technology as part of an overall change in how work gets done

Creating a high-performance organization that uses both process and technology to achieve breakthrough performance requires that organization to recognize that technology must be incorporated in a new and more streamlined process. When a process is inefficient, leadership must deploy the technology only after the process has been re-engineered to become efficient. Technology that simply automates a bad process is wasted.

ConnDOT can use technology in at least three areas:

- IT hardware and software can be used to help employees be more efficient in the internal processes or in processes involving existing or prospective vendors;
- Technology can be used to make ConnDOT employees more productive in dealing with the Department's key assets and with the public; and
- ConnDOT can use technology that enables the public to be more of a partner in making most effective use of the transportation system, and to create more value from the system.

In all cases, the underlying message is the same: Fix the broken process with new technology in mind, but do not use the technology to get more yield out of a bad process.

This undertaking is very difficult. New processes threaten people who are expert in the old ones. They create new winners and new losers even when they benefit ConnDOT and its stakeholders overall. Therefore, those threatened by new processes have understandable reasons to create obstacles to implementing them. ConnDOT will need leadership particularly skilled in change management accompanying radical process change. That skill set is insufficient today, and needs to be imported.

Change management through innovation requires talent that has been steeped in radical process innovation, and internal talent to know how best to implement change within ConnDOT. Change management skills, combined with understanding how those skills are applied in a transportation department, and with knowledge of ConnDOT's unique history and culture, are all needed.

Proper selection and deployment of technology can help close the funding and human resources gaps referred to previously. Technology can enable significant productivity improvements, although, by itself, it cannot close a funding gap of the previously-identified order of magnitude.

The other key requirement for technology implementation is a need to have the full life-cycle support costs identified with committed resources before the technology is acquired.

Theme 7: The need for having the right finance and funding mechanisms

How ConnDOT gets revenue has a profound effect on how it operates. Connecticut is atypical relative to how it funds transportation projects. According to the National Governors' Association (NGA) Center for Best Practices in a February, 2007, Issue Brief entitled State Policy Option for Funding Transportation:

"In 2004, of the approximately \$177 billion in public funds spent on highway and transit facilities at all levels of government, states' revenues represented 52 per cent of expenditures; federal grants 28 per cent; local governments and special tax districts generated 15 per cent and toll facilities (some of which are state-owned) 5 per cent."

Connecticut differs from the norm in three ways:

- It gets far more of its funding from the federal government (71% versus 28%) than average.
- It gets relatively little funding from local governments and special tax districts.
- It has no toll facilities, which are now in place in 33 states, with several more considering tolls.

Federal funding, which currently accounts for 71% of ConnDOT's project funding, contains a number of specific rules not only on how the money can be spent, but how ConnDOT must conduct its business to be compliant with federal guidelines. If ConnDOT continues to be overly dependent on federal transportation funding, federal agency decisions will remove a considerable amount of ConnDOT's freedom to organize itself and operate. The NGA Center for Best Practices report also points out that the Federal Highway Trust Fund is projected to run a deficit by 2009, which will have to be covered by either higher federal gas taxes or by additional funding from other federal accounts. Given federal budget challenges, the NGA Center report simply concludes "...the states likely will bear an increasing share of the responsibility for financing future transportation needs."

ConnDOT will also need to deploy resources more actively in Washington to make sure it is well prepared in any competitive federal funds allocation. It has always made getting all available federal funds a key priority.

Bond issuance will continue to be a major capital project revenue source. Bondholders impose conditions relative to the coverage of interest and principal repayments on ConnDOT. Therefore, ConnDOT must have a revenue source that supplies the consistent and sufficient revenue streams bondholders require.

Today, the largest revenue stream to cover bond carrying charges is the 25-cent-per-gallon gasoline tax. In 2006 and 2007, for the first time in recent memory, the revenues from this source dropped two years in a row. The 7% gross receipts tax was also implemented recently. The historically high and increasing gasoline pump prices may be causing motorists to drive less (which would be good, relative to congestion, natural resources, and road wear and tear), but motorists may also be driving as much as ever, but converting to more fuel-efficient automobiles. That's great for the environment, but dangerous if ConnDOT relies heavily on energy-usage-based taxes.

The report of the Massachusetts Transportation Financing Commission specifically noted that energy-usage-based tax revenues as a primary source of any transportation funding system are a wasting asset and are therefore unsustainable.

ConnDOT could rely on state appropriations, but these are less predictable than either of the other sources. Whatever the funding sources chosen, they must be stable and sustainable enough that they will not discourage qualified vendors from choosing to do business with ConnDOT.

ConnDOT needs to put more emphasis on identifying and advocating innovative funding methods at the federal, state, and local level. There are some innovative ways to finance projects which do not even require government funding. For example, the web site www.bicyclinginfo.org identifies specific examples of both private and community non-profit and foundation fund-raising sources. Companies like Eastman Kodak, Indiana Power and Light Co. and Recreational Equipment, Inc. all were identified as sponsors and sources for funding.

ConnDOT needs to:

- Re-evaluate ways to obtain sustainable funding both in terms of state and federal monies, and from private sector sources;
- Work with the General Assembly and the Executive Branch to enact any enabling legislation; and
- If the State decides to adopt electronic tolls and/or a variable toll pricing system, be responsible for its planning and implementation.

ConnDOT needs to have a higher-level, dedicated person, possibly with the Bureau of Policy and Planning with the skills required to carry out these responsibilities.

One broader recommendation is to consider alternatives to reduce ConnDOT's dependence on annual legislative appropriations. The need for sustainable, secure revenue sources is increasingly critical, especially given the many competing non-transportation-related demands on the General Assembly. The Special Transportation Fund cannot be held hostage to these worthy uses of State funds for it to meet the State's minimum transportation needs.

Theme 8: The need to continue to focus on doing business ethically, but with a concern that the process-oriented ethics focus may be counterproductive.

ConnDOT has ethics-driven processes with which it must comply, but ConnDOT could help the Governor and the General Assembly by engaging in a sustained dialogue about the practical implications of some of existing and proposed government actions. ConnDOT did express in great detail its concerns about the proposed contracting reform law, but the legislation left the framing of detailed contracting processes and rules to a newly-created Public Contracting Standards Board.

ConnDOT needs to lead in proposing ethics rules and processes that will pre-empt unintentionally over-reaching and onerous legislation. Doing nothing more than developing and publishing more transparent contracting and project management processes, as well as publishing and updating the State's goals, performance against those goals, and ConnDOT officials specifically responsible for achieving those goals will significantly reduce the opportunity for ethics violations. The more visibly ConnDOT operates, the harder it is for bad behaviors to remain undiscovered, and, therefore, the less likely it is that they will happen.

As ConnDOT undertakes to set its priorities and re-engineer its processes to improve its operating effectiveness, it can also simultaneously address some of the root causes of ethical violations. Besides the obvious benefits of transparency, ConnDOT can do the following:

- Leadership must identify the “bad apples,” to the degree that they exist, and take them out of the organization. Many organizations have ethics officers specifically responsible for receiving and investigating confidential complaints from employees or others who deal with that organization. Having a mechanism for “whistleblowers” inside ConnDOT to make ConnDOT leadership aware of ethics violations would be a positive step forward. This would also help address the “culture of fear” cited in some of the testimony, to the degree that it emanates from the actions of more senior ConnDOT managers.
- Make sure that ConnDOT does not put any employee in a position in which there is a significant gap between the objectives for which that employee is responsible and the ability to accomplish them. These “mismatch” situations sometimes cause otherwise honest employees to cut corners to meet their responsibilities.
- Make it clear that mistakes resulting from reasonable and intelligent decisions will not be punished. ConnDOT cannot create an environment in which fear of mistakes leads to cover-ups.

It is important to understand the strong link between ethics, accountability, and transparency. When people are held accountable for their actions, and when an organization's operations are transparent, it is much more difficult for people to act in an unethical way.

Some Broad-Based Recommendations

The Commission's working groups identified six specific improvement areas, but stepping back from their more detailed recommendations, we make the following recommendations:

- 1. The Governor and the General Assembly should look at the transportation system with a goal of achieving as much single-source responsibility for it as possible.*

For a trip involving a drive to a train station, parking, and then taking the train to another Connecticut town and a shuttle bus or taxi to the destination, multiple entities, only one of which is ConnDOT, are responsible for trip components. Some of those agencies would have objectives unrelated to improving the travel experience. In fact, for many towns which own rail station parking areas, the goal is either to maximize parking revenues or to have more spaces for competing uses, such as retail shopping adjacent to the train station.

The ownership, operation, and accountability of Connecticut's transportation infrastructure are highly fragmented. As the 2007 TSB Report describes, several airports (including Tweed-New Haven, which has had commercial airline service from time to time), are either owned by municipalities or by private citizens. Two of the three ports, Bridgeport and New Haven, are not state-owned.

Many of the bus lines, including some critical to shuttle services operating to and from rail stations, are not state-owned. Most of the parking areas adjacent to rail stations are operated by the towns, although owned by ConnDOT.

2. There are certain ideas of potentially very high value that need to be studied and considered as thoughtfully and expeditiously as possible.

There are many far-reaching proposals with the potential to change the structure and ownership of transportation services or the tools used in delivering them.

Four concepts being deployed elsewhere that need a serious dialogue and public debate are:

- The creation of a transportation authority owned by the State, but with its own funding sources, an independent and bi-partisan board of directors with staggered terms of office sufficiently lengthy to avoid having a single Governor over a single term be able to replace a majority of the board, and a chief executive officer elected by the Board
- The sale of selected transportation assets or services;
- The implementation of tolls with congestion pricing methodologies;
- The deployment of cameras to detect moving violations, such as traffic signal violations or speeding violations on highways; or the deployment of GPS systems that detect travel that violates automobile insurance policy coverage terms and conditions.

The Independent Transportation Authority

The State should consider creating an Independent Transportation Authority for the entire state or, on a narrower basis, a regional authority for a particular geography like the Southwest Connecticut coastal corridor. An independent authority would have responsibility for rail, bus, bridge, tunnel, and road assets. It would have an independent bipartisan board of directors with staggered terms of office such that no Governor could appoint a majority of the Board during a single term in office. The Board would elect the CEO of the authority.

The independent authority would have its own ability to issue bonds and access federal and state funds from sources designated by the State. It could do budgeting and planning outside the annual appropriations process. The Board and the CEO could make long-term decisions beneficial to the public. Having heard from many elected officials, as well as ConnDOT leadership, about change-resistant management and non-management employees who believe they can outlast politically appointed leadership, this structure would significantly empower ConnDOT leadership.

There are also arguments that can be made against having an independent authority:

- It removes critical, short-term decision-making on complex transportation and economic development issues from elected officials accountable to voters.
- It makes budget and planning discipline currently lacking in ConnDOT harder to achieve because of the less direct oversight the State would be able to exert.
- It may result in elected officials' taking less ownership of transportation issues than if ConnDOT remains a government department, as opposed to a special authority.

The Commission does not recommend a fundamental change in ConnDOT's structure at this time because its operational and strategic challenges are so great that the creation of a separate authority is not a workable

alternative until these challenges are addressed. However, we recommend that the Governor select a group to study this issue for consideration at a later time. Even if such a group rejects the suggestion, those favoring it will have had a fair opportunity to present arguments in its favor.

Partial Privatization

Partial privatization of transportation assets is a relatively new concept in America, although it is well established internationally. The Illinois Skyway outside of Chicago has been sold to a private consortium, as has a roadway outside of Washington, D.C. on the way to Dulles Airport. How well these systems work remains to be seen in terms of balancing the revenues needed by owner-operators and the public's acceptance of higher fees or tolls to get a better perceived quality of transportation services. Connecticut needs to learn from the experiences of these other states.

Electronic Tolls and Congestion Pricing

The TSB voted on December 19, 2007, to study electronic tolling systems. Some 33 states now have had tolls, and another five are piloting them. The next step, the implementation of tolls that vary based on factors such as the level of congestion on a roadway or bridge, is an idea discussed by New York Mayor Michael Bloomberg, but has been implemented in America in only a few localities. London has adopted this methodology by charging all drivers entering the congested parts of London during certain hours of the day, but the idea is controversial here.

Camera-Based Systems to Detect Moving Violations

Camera-based systems to detect moving violations, well established in many parts of America, such as the City of Chicago, are perceived by some citizens to be excessively intrusive. However, given the huge opportunity for improving safety, reducing the number and seriousness of unpredictable incidents that cause lengthy delays, and the opportunity to reduce the stress of driving caused by reckless law violators, these are ideas that must be considered seriously. They should be tested on a limited basis. We would recommend that legislation be enacted to allow these systems to be studied and tested.

Part 3: Reports And Recommendations Of Work Groups

Report of the Working Group on Organization and Procedures

Process

The Organization and Procedures Working Group met five times and heard presentations from various representatives of ConnDOT, the Office of Policy and Management, contractor organizations, and interest groups.

Background

ConnDOT was created in 1969 with a merger of the Department of Highways, the Department of Aeronautics, the Connecticut Transportation Authority, and the Commission of Steamship Terminals. At the same time, two new bureaus, the Bureau of Administration and the Bureau of Planning and Research, were created. That is largely the same organizational structure in place today.

At the time that ConnDOT was created, local bus service was operated by private carriers, with the State's role limited to regulatory matters. In the 1970's, as the State and local transit districts assumed responsibility for funding and, later, operating local bus service, those State programs were added to the responsibilities of ConnDOT. During the early 1990's, the former bureaus of Aviation and Waterways were combined into a new Bureau of Aviation and Ports.

There are presently five bureaus within ConnDOT:

- The Bureau of Aviation and Ports
- The Bureau of Engineering and Highway Operations
- The Bureau of Finance and Administration
- The Bureau of Policy and Planning
- The Bureau of Public Transportation

ConnDOT is also represented on the State Traffic Council, which has responsibility for reviewing many local construction and economic development projects.

Under the original organizational structure, the Department of Transportation was headed by a Commissioner and a principal Deputy Commissioner who are responsible for overall agency operations. In addition, a Deputy Commissioner headed each of the bureaus. As in all state agencies, the Commissioner was appointed by the Governor with the advice and consent of either house of the General Assembly. Deputy Commissioners were appointed by the Commissioner. About a dozen years ago, bureau chiefs chosen from among ConnDOT employees generally replaced Deputy Commissioners as Bureau heads.

Current ConnDOT Reorganization Efforts

During his tenure as ConnDOT Commissioner, Ralph Carpenter undertook several efforts to reorganize and redirect existing ConnDOT operations. These include the consolidation of all financial functions in one bureau, separation of the existing Bureau of Engineering and Highways into separate engineering and highway bureaus, and enhancement and reorganization of quality control efforts. The working group supports all of these efforts, and believes they are essential to the department's future.

Organization Issues

As part of its charge, the working group reviewed the existing organization structure of ConnDOT. While we concluded that the current model of a single consolidated ConnDOT should be maintained, in order to provide a coordinated response to the challenges of transportation and economic development, we recommend several improvements in the current organization and structure.

As currently constituted, ConnDOT consists of three bureaus with primary modal responsibilities and two (Policy and Planning, and Finance and Administration) which play support roles. If ConnDOT is to achieve its goal of coordinating transportation policy and operations, all elements of ConnDOT must work together toward a common mission. This requires leadership, clearly established and articulated goals, performance measures and accountability. The working group is concerned that, too often some or all of those attributes are missing from ConnDOT.

Strategic Planning

In a public agency, strategic planning involves not only the agency, but also the Governor, the legislature, other agencies and stakeholders. However, it is generally the agency which drives the strategic planning process.

A significant part of the personnel and resources of ConnDOT are devoted to planning. Each year, ConnDOT undertakes or participates in dozens of planning exercises, generally through the Bureau of Policy and Planning. However, these efforts are largely focused on specific projects, problems or corridors. Even the department's "Master Transportation Plan" is largely driven by existing and planned projects.

Early in this decade, concern about ConnDOT's strategic planning efforts and capacity, among other issues, led to the creation of the TSB, which is charged with developing and adopting a transportation strategy for the state. While we believe that the TSB plays an important role in strategy development, we believe that is no substitute for an effective strategic planning capacity within the department, one which is comfortable in integrating transportation planning and strategy with economic development and competitiveness, environmental, public safety, and other public policy considerations.

Evaluation

Another organization shortcoming which the working group noted was a lack of overall systems and metrics for measuring and evaluating the cost and effectiveness of the department and its programs and services. As we have noted throughout this Report, many states use and publish very specific metrics in evaluating their own employees, as well as communicating their performance and progress to their outside stakeholders. They recognize the power of the saying that "What gets measured gets done."

Recommendation: Create an Office of Strategic Planning and Evaluation

In order to address these issues, the working group recommends the creation of a new Strategic Planning and Evaluation function, an appointed position reporting directly to the Commissioner. This office should be the focal point for ConnDOT's strategic planning and evaluation efforts and to work closely with the TSB and agencies and organizations involved in these issues, and with other stakeholders.

We are encouraged that ConnDOT has created an Asset Management and Performance Measures group within the Bureau of Policy and Planning, a group specifically tasked to develop a set of criteria for evaluating the quality of ConnDOT's work in maintaining its existing assets. This is a good start, but it needs to be supplemented with a much broader evaluation function that supports the development of measurable strategic priorities.

Recommendation: Create a Chief Operating Officer

Currently, ConnDOT's senior leadership includes the Commissioner and three Deputy Commissioners. Each of the Deputy Commissioners is responsible for oversight of the one or more bureaus. Under this model, the only senior official responsible for overall agency operations is the Commissioner. The working group believes that it is essential to strengthen oversight and leadership over all ConnDOT activities. For that reason, the working group is proposing the creation of a new position of Chief Operating Officer, an appointed position, responsible for assisting the Commissioner in day-to-day operations and implementation of department wide policies, as well as coordination with other state and federal agencies. The Commissioner should consider whether a Chief Operating Officer could also have all transportation operations reporting directly to him or her, rather than through bureau chiefs responsible for each mode of transportation.

In developing requirements for this position, we recommend that the position be used to bring in capability to develop and implement the continuous improvement and quality program that is discussed later in the People and Culture Working Group Report. (See recommendation 3 in that section). Quality, in terms of process discipline, is a severe shortfall within ConnDOT.

Stakeholder Management

One of ConnDOT's biggest challenges is to manage its external stakeholder relationships. There are three sets of stakeholders it must continually manage: first, those with power over it; second, those with which it partners to accomplish its mission; and third, those whose lives it impacts and who have the ability to affect its actions.

In the first group, we include key federal government agencies, such as the U.S. Department of Transportation, the Environmental Protection Agency, the Department of Homeland Security, and Connecticut's Congressional delegation. In Connecticut, we include the Governor; the Office of Policy Management, other agencies that must approve actions to be taken by ConnDOT, such as the Department of Environmental Protection and the Department of Economic and Community Development, and the General Assembly.

In the second group, we include Metro-North, the ride brokerage agencies with which it contracts, the private bus companies with which it has relationships for the joint provision of services, the regional planning organizations and the city and town governments with which it works, and Amtrak.

In the third group are the citizens, businesses, and community organizations affected by its decisions. Elected officials at both the local and state level will be involved in every decision ConnDOT makes. At a minimum, it must do the following:

- Elected lawmakers representing affected communities for a project should be briefed on how the project relates to the State's overall transportation strategy.
- ConnDOT should seek advice from the lawmakers on how best to engage the community, and should do so.
- Citizen concerns should be taken into account to the extent possible.
- When the lawmaker and the community cannot have their requests accommodated, ConnDOT has to explain why in a polite, understandable, and respectful fashion.

ConnDOT has a reputation of either ignoring the lawmakers and the communities affected, or caving in to powerful lawmakers for no reason other than fear of confrontation. Both of these approaches destroy ConnDOT's credibility. It needs leaders with the skills to approach each situation sensitively, but firmly.

Each of these stakeholders profoundly influences ConnDOT's ability to fulfill its mission. The Commissioner's role is most appropriately focused on managing these stakeholder relationships, and he or she needs the appropriate level of staff support to be effective in managing each of these stakeholder groups. Two of the key skill sets ConnDOT will need to have in much greater abundance are:

- The ability to work with the first group of stakeholders to identify, prioritize get agreement on, and fund ConnDOT's key strategic priorities; and
- The ability to work with both the second and third groups of stakeholders to manage the conflicts inevitably occurring as ConnDOT attempts to execute on these priorities.

Recommendation: Create a political liaison staff function supporting the Commissioner and reporting directly to him or her.

We recommend that a political liaison function be created, an appointed position, reporting directly to the Commissioner, which will assist the Commissioner in managing the politics associated with the development and acceptance of its strategy and the management of stakeholder issues associated with projects. ConnDOT has a very capable career executive responsible for state legislative relationships, but it needs more support for this function and a complementary resource allocation for Washington.

We also include among the responsibilities of this function the development and management of relationships with key federal government stakeholders. It may not have been necessary in the past to have a dedicated Washington presence, given the State's great success in securing federal funds, but in an increasingly competitive and complex federal legislative and regulatory environment, such a presence is needed. We would recommend that ConnDOT consider either having in place in Washington, D.C., a full-time person residing inside the Governor's Washington office and responsible for managing relationships with all federal government stakeholders, including U.S. DOT, Homeland Security, and the Environmental Protection Agency, or that it retain for a period of

time one or more expert resources to help guide it in the new funding environment. We believe that the Commissioner should decide which alternative works best, but that he or she should be given the power and the budget to make that choice.

We also recommend that the Commissioner and the members of the senior team responsible for involvement with the federal government be empowered to visit Washington as needed to accomplish ConnDOT's broadened objectives.

Financial Management

ConnDOT is consolidating all financial management responsibilities in the Bureau of Finance and Administration. This represents a major departure from past practice under which each bureau controlled some of its financial functions. It is intended to strengthen financial management and oversight, reduce the number of transactions requiring the involvement of more than one bureau, and support the reorganization of financial management systems, policies, and procedures. The working group has unanimously expressed its strong support for this important initiative.

Recommendation: Implement the CORE system fully

If this reorganization is to be as effective as possible, ConnDOT needs to commit itself to using the CORE financial management software package department-wide. This system, introduced in 2003 for other state government agencies, became fully operational in 2007 for ConnDOT. It requires that each project have its own separate financial budget, and that project expenses be paid from that budget, and not from general ConnDOT funds. ConnDOT's failure to develop a full operations manual for CORE implementation, and to insure that personnel were fully trained, caused many problems including delays in paying vendors. CORE is designed to enforce a set of appropriately precise rules regarding whether and when payments can be made, and ConnDOT needed to have processes in place to comply with them. There may be a need to have some degree of customization for CORE to meet specific and complex ConnDOT requirements, compared with other State agencies, but ConnDOT needs to continue to work with OPM to have the minimum level of customization required.

The CORE system implementation raises a more fundamental set of issues about ConnDOT's lack of discipline in planning, budgeting, monitoring, and managing large projects. Cost estimations are done too early and too incompletely. They are routinely off the mark. The risk factors that would change estimates are not properly identified and managed, and the rationale for estimate adjustments are not adequately communicated to stakeholders. The CORE system implementation was designed to instill some of the discipline that would address these issues.

The Commission recognizes that there are arguments to be made that ConnDOT has unique needs for the CORE software packages, given the preponderance of federal funding requirements, but an imbedded ConnDOT applications expert can mediate between ConnDOT and the Office of Policy and Management to balance the conflicting needs for standardization and customization.

Recommendation: Strengthen the Internal and External Audit Functions

The working group also believes that, as part of the effort to improve ConnDOT's financial management system, internal and external audit functions should be enhanced while maintaining current reporting relationships. While a finance reorganization may not initially appear to be a high-impact action, if executed properly, it could have a profound impact on ConnDOT's ability to function effectively, and it should accelerate payments to vendors. One of our learnings from the survey taken by the People and Culture Work Group to which 50 pre-qualified vendors responded, is that ConnDOT may be experiencing a 10% to 50% inflation factor on bids because of the difficulty of doing business with ConnDOT, which includes lengthy payment delays.

Beyond the staffing of these functions, ConnDOT needs to have a process by which it is audited, and it reports on the audit findings, the corrective actions it has taken or plans to take, and the results of those corrective actions. Other states report on audit findings and their response to them. (See the Washington Department of Transportation web site as an example.)

Engineering and Highways

The Bureau of Engineering and Highways is, by far, the largest within ConnDOT. Its mandate includes both the management of the state highway system and engineering support for highway and most other ConnDOT programs.

ConnDOT plans to separate the existing bureau into separate Engineering and Highway bureaus. Under this plan, the new Bureau of Engineering will be responsible for engineering and construction services, including construction oversight and quality assurance. The new Bureau of Highways will be responsible for highway operations, maintenance, and congestion mitigation.

Recommendation: Separate the Bureau of Engineering and Highways

The working group supports this initiative and recommends that the Commissioner consider consolidating all engineering functions into the new Bureau of Engineering, in much the same way that all financial functions are currently being consolidated in the Bureau of Finance and Administration.

Another benefit to the separation of Engineering and Highways is that it will enable Engineering to operate more as a shared service, to develop engineering capability tailored to public transportation needs. The feedback we heard from ConnDOT public transportation employees was that the engineering group was predominantly trained in road and highway project work.

There is also a need to enhance the engineering capability for building construction, to supplement the engineering capability ConnDOT already has in place for highways, bridges, and tunnels.

However, although we recommend a separation of engineering and highway operations, we believe that cross-training and cross-functional collaboration are vital. Therefore, we want ConnDOT to insure that engineers get significant experience working in Highway or Public Transportation Operations, and that selected operations employees are rotated into the Engineering Bureau.

We also believe that planning and engineering are very closely inter-related, and that there be a cross-fertilization of planning skills in the Engineering organization, and engineering skills in the planning part of the Policy and Planning organization. The engineering organization of the future will have far more of a systems management capability than the traditional civil engineer has needed in the past.

Policies, Practices, and Procedures

Public Transportation

Over the past several years, there has been a major change in the State's approach to public transportation. Rail and bus services, once considered the stepchild of the transportation system, have emerged as the focus of three gubernatorial and legislative initiatives. Indeed, in 2006, public transportation programs were essentially the sole focus of the Governor's transportation initiative, and made up a substantial majority of the projects subsequently approved by the General Assembly. The working group strongly supports this new focus, and urges the Governor and the General Assembly to continue their strong support for public transportation.

ConnDOT has responded to these initiatives by strengthening its public transportation functions. Earlier this year, a new Deputy Commissioner was appointed to oversee the Bureau of Public Transportation, as well as related issues like Transit Oriented Development. However, the TSB, legislators, and advocates have all expressed frustration with the slow implementation of major public transportation initiatives, including the New Haven-to-Springfield rail service and the New Britain-to-Hartford busway. The working group agrees with the TSB that timely implementation is essential to an effective transportation program, and recommends that the Governor, agency heads, and, if necessary, the General Assembly take action to address the causes of delay.

The working group is also concerned about ConnDOT's capability to develop, implement, and evaluate public transportation programs. The State remains largely dependent on its contract operators, including Metro-North. ConnDOT needs to enhance its capability of independently evaluating rail and bus policy options and operations.

As part of its review of public transportation functions, the working group considered changes in governance and funding of public transportation services, including creation of a dedicated enterprise fund to support public transportation and creation of a separate Public Transportation Authority or advisory board to oversee public transportation programs. While the working group is not recommending, at this time, that the responsibility for public transportation be shifted from ConnDOT to an independent authority, it does believe that further discussion of the best way to organize, govern, and evaluate public transportation services is warranted.

The creation of a separate Public Transportation Authority has certain potential advantages:

- An organization would be created with a single-minded focus on public transportation;
- This organization would be particularly beneficial to the regions of the state that have significant public transportation assets, such as the coastal corridor;
- It could be designed to create its own funding sources, which would mean that public transportation would have dedicated revenue sources that could be more sustainable and stable, and less subject to year-to-year political priorities or spending cuts; and
- It might spur innovative approaches to public transportation.

The potential drawbacks are:

- The state needs an integrated multi-modal focus, because many public transportation users, particularly those who use the trains, begin or end their trips in an automobile, so there is a need for an end-to-end focus on the trip that uses public transportation as part of the process;
- ConnDOT needs a strong focus on individual, non-motorized forms of transportation, with low capital investment requirements compared with public group transportation;
- Increasingly, transportation needs to be integrated with economic and community development, smart growth, environmental, public safety and homeland security initiatives. Once again, having a multi-modal perspective integrated with these other perspectives is essential;
- The notion of shared services works better in a single, integrated department of transportation. The tendency in a separate bureau or authority may be to duplicate the capabilities already in place inside the other part of the transportation authority;
- To a greater degree than exists today, ConnDOT needs to be customer-centric, as opposed to transportation- mode-centric. It needs to have some advocate for reducing the usage of all modes of transportation and for solutions such as telecommuting, shorter commutes to a satellite location, having items delivered instead of going somewhere to pick them up or shop for them, or using video-conferencing alternatives. Adding another dedicated single-mode bureau may detract from that demand-based focus.

Recommendation: Evaluate the merits of a separate Public Transportation Authority compared with an Enterprise Fund Structure with multi-modal responsibility for specific regions

The Working Group did not draw a conclusion about the best way to balance the need for enhanced focus on public transportation and the need for an integrated, multi-modal, demand-based focus on transportation. The benefits of some form of separation of public transportation from the remainder of ConnDOT are compelling, but we do not feel that the case for a completely separate Public Transportation Authority is so compelling that it should be adopted as the recommended solution now. In fact, given the absence of a ConnDOT strategy geared to making difficult choices or a process for collaboration, accountability, transparency, and measurement, this kind of major reorganization would not accomplish anything at this time.

One alternative proposed in testimony to the Commission that needs serious consideration was the proposed creation of an enterprise organization focused on the coastal corridor that would have control over rail, highway, bus, and parking assets, and would control all revenue streams related to any of these assets. This board would include representatives from the Departments of Economic and Community Development, Environmental Protection, and other departments such as Public Safety. This is a sufficiently credible alternative to a statewide Public Transportation Authority that it also needs to be studied.

We believe that ConnDOT has so many fundamental strategy, people, process, and funding issues that any major structural change made now would be built on a shaky foundation, and, therefore, should be deferred until the basics of ConnDOT are fixed. Moreover, it is not clear to us that a structural change will have an effect of making ConnDOT more responsive and accountable than it is today.

Therefore, while we think these alternatives should be studied, we are not recommending a short-term implementation of any of them.

Recommendation: Formalize and standardize all operating leases relative to rail station parking areas and accelerate ConnDOT takeover of town rail station access responsibilities

We took notice of a 2005 Rail Station Governance Study done by Urbitran Associates that reviewed ConnDOT's leasing practices relative to the rail stations on the New Haven Line. One suggestion presented to us is that we recommend that ConnDOT take over operation of all parking areas. That recommendation is consistent with the direction ConnDOT has been taking, as it has taken over a number of parking areas in the past few years, including those in Stamford and New Haven.

We would endorse the Urbitran recommendations that ConnDOT have more formalized lease processes, that it have sufficient staffing to insure compliance with lease requirements, that it drive standardized lease terms to the extent possible, and that it undertake an analysis of how it can maximize access to the rail stations. We do not believe that the answer lies solely in expanding parking capacity at the existing rail stations along the main line. There are multiple solutions at which ConnDOT needs to look, including:

- Expanding branch line station access;
- Providing other forms of station access, including better bicycle access; and
- Identifying other parking facilities away from the stations, in partnership with town officials.

The Commission is encouraged that ConnDOT is evaluating the creation of additional main line rail stations at Orange and West Haven, which would add significant parking capacity to the New Haven Line.

As the Urbitran study makes clear, towns were made responsible for rail station parking operations because of a belief that towns understood better how to integrate rail station parking into an overall town development plan. That rationale is still valid, and, given ConnDOT's need to upgrade its stakeholder management capabilities,

transferring complete responsibility for rail station parking areas all at once is not advisable. The transfer of control of parking needs to be staged with ConnDOT's building of its capabilities to manage the complex challenges of its relationships with towns and Metropolitan Planning Organizations.

Recommendation: Enhance ConnDOT's capability to develop and implement a comprehensive rail freight plan.

The working group's discussion of rail service included consideration of ways to improve and enhance rail freight services as a means of diverting highway traffic, reducing congestion and improving highway safety. While recognizing the obstacles to enhanced rail service, the group believes it is essential for ConnDOT to develop a comprehensive rail freight plan that allows the State to make the best use of its rail freight infrastructure and facilities. ConnDOT has done a number of preliminary studies over the years, but, due to staffing limitations, has not moved forward aggressively with a comprehensive rail freight plan. ConnDOT needs to enhance its staffing sufficiently to be in a position to incorporate rail freight as a core part of the State's transportation infrastructure.

Recommendation: Create a higher-level function responsible for non-motorized transport and smart growth

No single issue generated as many comments as the need for enhanced bicycle and pedestrian services. The working group urges ConnDOT, the Governor, and the General Assembly to provide increased support for these important programs. ConnDOT should consider a dedicated focus on these programs as it interfaces with the other agencies responsible for transit-oriented development. ConnDOT has a small and relatively new function or bicycle and pedestrian initiatives, but we urge that it be given higher visibility and priority within ConnDOT.

Today, pedestrian, bicycle, ride-sharing, and van-pooling solutions are given relatively low priority, and are treated as if they are marginal opportunities not worth high-level attention. ConnDOT's culture is dominated by individuals who solve transportation and mobility issues by building or expanding highway capacity and by acquiring rail cars or buses. Solutions involving no significant capital investment that would expand pedestrian and bicycle transport are given insufficient attention.

There is even less attention given to solutions that eliminate vehicle trips altogether, or make them a great deal shorter. Using transportation funding to encourage smart growth initiatives that shorten the distance between people and their places of work, recreation, shopping, school, and other vital services such as health care is an approach that requires new thinking to be imported into ConnDOT and requires that thinking to be imbedded at a higher level in the organization.

Business Processes and Staffing

The working group believes that perhaps the most significant challenge confronting ConnDOT relates to reform and updating of internal business processes, which, the group believes, can be simplified and streamlined, and can take better advantage of new technologies.

Recommendation: Streamline the process for contract and other legal document review

The group believes that business process redesign is needed, and offers ConnDOT an opportunity to redefine and improve how it does business. That process should include stakeholders and agencies critical to ConnDOT's success. For example, ConnDOT should work closely with the Attorney General to address the time required to process and review contracts and other legal documents.

Such a process will be neither quick nor inexpensive. It will require detailed evaluation of existing processes, the involvement of ConnDOT employees at all levels, and outside assistance.

But the opportunity for improved service, enhanced accountability, and cost savings once process redesign is put into place will justify the time, effort, and potential disruption.

Business process review should include a needs assessment and realistic estimates of the staff required to perform the work. Those estimates should serve as the basis for agency budgets going forward.

Contracting Process

The working group devoted a significant effort to reviewing ConnDOT's contracting process for both consultants and construction contractors. The group also had the benefit of a survey of ConnDOT contractors conducted by the People and Culture Working Group.

We feel strongly that whatever contracting process is adopted must be efficient, transparent, and accountable.

Recommendation: Adopt, as appropriate, contracting methods new to Connecticut, such as “design-build” contracts.

During the group's review of contracting processes, many issues were identified, including the need to be more transparent, to provide more information about planned procurements, especially for consulting services, to use contracting methods new to Connecticut, such as so-called “design-build” contracts, to address billing and payment issues, including the need for more timely dispute resolution. The NGA Center for Best Business Practices discusses this set of procurement tools on page 19 of its Report:

“Through agreements between state departments of transportation and private partners, states can collapse several stages of the project development process into one contract including design-build (DB), design-build-operate (DBO), and design-build-operate-maintain (DBOM) provisions. These new tools, unlike traditional contracts, do not require separate contracts for every stage of the design-and-build process. New Jersey has used DB contracts to collapse the redecking of Route 1 in Trenton, reducing project time by 22 months and costs by \$2.25 million. DB was successfully used to reconstruct I-15 in Utah in four years rather than six...As of 2005, at least 32 states have procedures in place to facilitate such procurement tools...These procurement public-private partnerships can accelerate project construction and allow governments to share financing responsibilities and risk.”

We recognize that design-build contracts eliminate a particular stage of oversight. This poses some risks, but we believe that since over half of the states have some form of design-build contract process, this idea needs further consideration. However, we also believe this move has the potential to increase accountability, since it will increase single-source responsibility for a particular contract.

We would not recommend broadly implementing alternative contract methods until ConnDOT has a better capability than it has today to supervise a multi-stage project. As the independent talent assessment is being done, it will identify how ConnDOT needs to build to enable this supervision capability to be in place.

Recommendation: Give consultants and other contractors more transparency relative to anticipated projects so that they can do a better job documenting their qualifications.

A significant part of the group's deliberations involved the law governing ConnDOT's selection of engineering and other professional consultants. This contracting process is governed by a ConnDOT-specific law enacted in 1982 following a procurement scandal. Under this contracting procedure, consultants submit their qualifications for specific projects based on limited information about each project and the work involved. Once the contractor is selected, there are sequential negotiations concerning the scope of work and the contractor's fee.

Contractors and contractor organizations who appeared before the working group and/or responded to the survey discussed above complained about the need for improved construction documents and argued that, in the absence of information concerning the projects that ConnDOT intends to bid during a given period, they have difficulty determining for which projects to submit proposals. They requested that ConnDOT prepare a semiannual

project listing, just as it does for construction projects, in order to provide better information to potential contractors. The working group believes that this request is both reasonable and appropriate, and that the information should be posted on ConnDOT's web site.

The group is also concerned that the current system deprives the state of cost-competition benefit, since both the scope of work and the price are not discussed or negotiated until a contractor has been selected.

Recommendation: Streamline the dispute resolution process

Contractors expressed concern concerning the timeliness of both dispute resolution and payment. In addition, an organization representing construction contractors argued that ConnDOT field employees should be given more decision-making authority in order to reduce delays. The working group recommends that, as part of the overall review of ConnDOT business processes, the dispute resolution process be reviewed to insure that timely decisions are made, consistent with the State's best interests.

The State, through the Contracting Standards Act, has created both an infrastructure and a set of standards for addressing contract process issues across the entirety of state government. The newly-created Public Contracting Standards Board will have a profound effect on how ConnDOT operates. We recommend that the Board take serious input from prospective vendors, from the firms that provide vendor bonding and insurance, and from suppliers of construction materials and commodities.

Recommendation: Make sure that the Public Contracting Standards Board consults with the newly-created Vendor Advisory Council

The Public Contracting Standards Board has the potential to drive perceptions of fairness, transparency, and discipline that make ConnDOT a more attractive entity with which to do business, which will provide great benefit to Connecticut citizens or it can create such an onerous contracting environment that it will drive vendors out of the State, and significantly increase both the cost and the time to get projects done, and reduce the amount of transportation capability Connecticut can acquire with its scarce funds. The level of detail and complexity in the legislation, and the fact that it was enacted with relatively little input from many different stakeholder groups mean that the important work of making the legislation achieve its intended purpose is largely ahead of us. It is imperative that this Board consults closely with the Vendor Advisory Council for which the legislation provides.

Project Management

Managing large, multi-year projects is an extremely complex task. Beyond the process of obtaining public input and managing conflict, which are considerable skills not sufficiently present at ConnDOT, there is the process of simultaneously defining and refining project requirements and scope, project costs, legal and regulatory impacts, process constraints, and public messages.

Recommendation: Publish all projects, with descriptions of work, timelines, accountable project leaders, and status

One critical requirement for ConnDOT credibility in projects is to publish a list of projects, their status, both financially and operationally, and a frank description of issues affecting their timeliness, their ability to stay within budget, or the ability to meet the technical requirements for which ConnDOT has contracted. One very good example of such published lists is the State of Washington DOT's The Gray Notebook, which not only lists every project and its status, but also has a "Watch List" of projects that are identified as having cost or scheduling concerns, and an explanation of why these projects are on the "Watch List." This is a level of transparency far beyond where ConnDOT is today, but a level to which it should aspire..

Another model might be the Utah DOT model, in which Utah publishes actual (versus estimated) costs, and lists scheduled milestones and completion dates for every project. Utah also lists project leaders and their contact information. While ConnDOT publishes the contact information for very large projects, there are many smaller ones regarding which we have received feedback that there is no clear accountability.

One of the best ways to drive ethical behavior by all ConnDOT employees and those consultants and contractors who work with them is to have an exceptionally high degree of transparency and accountability on every project.

Interaction with other Agencies and the Public

ConnDOT does not function in a vacuum. Its planning, construction, and operations all involve interaction with other local, state, and federal agencies, including federal funding agencies, state and federal environmental agencies, the Department of Economic and Community Development, and the Office of Policy and Management. The working group recommends that ConnDOT take steps to ensure that all affected agencies and stakeholders are engaged as early as possible in the planning and implementation process. “Engagement” does not mean solely notification of a particular intended step in the process. It means a proactive effort to identify all relevant stakeholders, to get them engaged, and to make sure that their potential issues are raised and addressed, even though most conflict resolution does not result in anyone getting 100% of what they want.

The working group also believes that ConnDOT must become more transparent and work with a wide variety of stakeholders. This kind of communication does not just exist as part of a compliance-driven process, but is a continuous process of building a trust relationship with each stakeholder, and of educating the stakeholder about big-picture issues. Toward that end, we urge ConnDOT to take steps to improve customer service and feedback, including using customer satisfaction surveys, improved communications and complaint procedures, and ensuring stakeholder involvement in all ConnDOT projects and steering committees, as well as getting feedback on ConnDOT’s day-to-day operations.

Recommendation: Create a new Citizens’ Representative Office

Many public agencies have an office of public advocate or an office of consumer advocate that is a funnel for public feedback. This function can see broader themes and issues in random feedback, and can also find ways to improve public input. ConnDOT would benefit from creating such a function. This position should be high enough in ConnDOT that it has credibility and stature with the Bureau chiefs proposing and executing major transportation projects, but, it needs to function for feedback on day-to-day operations, not just large projects. What Mayor Michael Bloomberg did in New York with his 311 telephone number for reporting on a wide range of problems needs to be replicated in some form here in Connecticut, and the ConnDOT infrastructure needs to be in place to make such public feedback mechanisms effective.

A model at which ConnDOT should look is Oregon’s Citizens’ Representative Office, which appears to have a broad-based responsibility for receiving public feedback and for figuring out how Oregon DOT can best communicate with its stakeholders. Another model closer to home is the City of Stamford’s Citizen’s Service Bureau, a vehicle for citizens to get answers on a wide range of issues important to them.

We recommend that ConnDOT create a Citizens’ Representative Office, which would have the following responsibilities:

- To receive day-to-day feedback on how ConnDOT is doing relative to fulfilling its mission. Unlike the stakeholder management identified above, this would not relate to legislative outreach or to the complex issues associated with project selection and execution; rather, this would be more focused on problems such as potholes in roads and broken traffic signals.

- To create and/or manage the mechanisms for receiving that feedback. For example, this office would manage the e-mail system for citizen problem identification on the ConnDOT web site. This office could also create a 511 number to allow telephone input on problems, or the 311 number that New York has, or a *77 number, similar to that which New Jersey has created, to report on reckless drivers.
- To create and manage a 511 telephone system for motorists to get up-to-date information on traffic conditions. (See also the Report of the Working Group on Technology.)
- To receive real-time input on traffic conditions directly from citizens and other drivers, and incorporate that input into the 511 system.
- To receive public feedback through broad, periodic surveys about how ConnDOT is performing and also what the State's citizens consider to be the highest priorities.

Any system for receiving input that requires response and resolution must have sufficient staff support to meet citizen requirements and a service standard that is advertised to the public. This service standard should be benchmarked and should drive the staffing. The only thing worse than having not citizen representative system is having one that does not work as promised.

Report of the Working Group on Strategic Planning

The Strategic Planning Work Group conducted meetings with ConnDOT and the Bureau of Policy Planning, and also studied 2006 TSB documentation of meeting minutes, public hearings and the TSB Strategic Plan, which was submitted to the Governor and Legislature in January 2007.

Strategy can be defined as determination of basic long term goals and objectives of an organization, and adoption of courses of action and allocation of resources necessary for achieving them. One can consider strategy to be the "intent," and the organization's structure, processes, managerial discipline, and acceptance of accountability as the "actions" required to achieve its stated goals. Strategy also has an essential attribute of requiring the making of choices to follow certain courses of action and not to follow others, particularly in a resource-constrained environment.

ConnDOT is not devoid of strategy. In fact, one might suggest that is encumbered with a multiplicity of state and federal requirements that blur the vision of its true strategic imperatives, thus creating a project-focused, reactive planning process, not one aligned with the stated, endorsed, visionary objectives Connecticut is trying to achieve.

Federal and state-mandated plans should continue to serve as points of input, checks and balances for our progression against a clearly defined and articulated future strategy, and efficiently integrated into the planning process, not to impair execution.

But a clear acknowledgement of a recognized strategic document for Connecticut must be acknowledged. Today, by statute, the TSB plan is such. It is therefore paramount that this document align and comply with all other documents, and be recognized and serve as the primary instrument of capturing and detailing the strategic imperatives and directives against which ConnDOT will execute.

Recommendation: Lodge strategy development responsibility with ConnDOT in a collaborative process that engages all key stakeholders, but reconstitute the TSB

Beyond acceptance, the ownership of the plan, with all associated accountability for execution against objectives, must reside with ConnDOT, but with a requirement that ConnDOT engage all key stakeholders in developing and refining the strategy, particularly the Executive Branch and the General Assembly. The lack of strategic planning capacity within the department, as identified by the Organization Structure and Process Working Group, is also recognized by this working group, and we recommend that this be addressed. As part of this solution, as well, the composition and role of the TSB should be re-examined and its charter and responsibility be reviewed against future organization changes that address strategic planning within ConnDOT.

Today, the TSB is predominantly a board constructed to have a wide range of stakeholders represented with designated board “seats.” For this Board to fulfill its oversight function relative to the State’s transportation strategy, it needs to be redirected so that every member is appointed based on the ability to represent the interests of all citizens. While members will have life experiences that will make them more receptive to some stakeholders rather than others, Board members need to be advised that their fiduciary obligation is to represent all citizens. If they need additional staff support to fulfill this fiduciary obligation, it should be provided.

In creating any strategy for any institution, it is of utmost importance to ensure that the vision is clearly stated and focused, and to align it with the identified and expressed needs of the constituencies.

Connecticut does not suffer from a lack of passionate involvement, participation, and expression of strategic need by the public and its legislative leaders. But this input serves to cloud strategic clarity and helps to reinforce a “project-focused” mentality and dialogue. Identification, endorsement, and rallying around clearly stated “macro challenges” or “big headlines” is fractured, and therefore cause dialogue and debate to gravitate toward a more project-related dimension.

There must be a galvanizing effort by Executive, General Assembly, and ConnDOT leadership as to the macro-challenges to address. There are plenty from which to choose... congestion, pollution, safety, economic development, changing demographics ... to note but a few. Opinion and debate on any topic is robust, and frankly encouraged.

Here is the recommended procedure:

- The Commissioner needs to assemble his or her team and agree upon a set of strategies achievable with various levels of available funding.
- The Commissioner, along with his or her staff representatives, needs to discuss the strategy with the Governor and staff, with the Office of Policy and Management, with the relevant leadership and committee members of the General Assembly, and, to the extent necessary, with other interested members of the General Assembly.
- Given the importance of federal funding, the strategy will need to be discussed with key federal officials from U.S. DOT, the Federal Transit Agency, the Department of Homeland Security, and the Environmental Protection Agency.
- The Commissioner then needs to discuss the strategy with a much broader group of stakeholders, including other key agencies, such as DEP, DECD, Public Safety, the Department of Motor Vehicles, the Department of Administrative Services, the MPOs and RPAs, town officials around the state, major businesses and other large groups, and groups of citizens.

This process would obviously result in modifications or refinements, which then have to be taken back to ConnDOT’s managers and employees.

At some point, the directional decisions must be made and rallied around. To facilitate the all-important process of interacting with all these constituencies, the group supports the recommendation that an Office of Political Liaison be created. Bureau chiefs represent only the direct area of responsibility they manage and, hence, should not speak for the overall strategic direction.

There are motivating factors directing our thoughts and strategic preparedness. Climate change, land use and residential tax base, NEPA, CEPA, and inter-agency coordination within the State of Connecticut, all intersect within the planning process. These, along with all the federal agencies we are involved with, only cause one to recognize there is a great deal of coordination within bureaucracy today to navigate. It would be wise to attempt to address such through process examination and re-engineering, but only after the strategic clarity is improved.

Presently, there is little clarity. Hence, there is no rallying around the vision and specific plans for each one of our transportation modes. Specifically, the Department of Administrative Services survey reported that ConnDOT employees felt pessimistic about strategic planning and the use of performance measures around the Department. They expressed concern over a lack of effective communication around the mission and vision of ConnDOT. They questioned the appetite within ConnDOT for change and continuous improvement. The People and Culture Working Group has identified this gap, and our working group supports their recommendation of infusing talent at leadership levels to drive change management and communication.

With vision, clarity of purpose, enhanced communication, and interagency coordination improved, the focus on creating an ability to develop and maintain flawless operational execution is next. This will certainly require a shift in the culture, and, in some cases, the behaviors of the ConnDOT. The findings of the Working Groups on People and Culture, and on Organization Structure and Process have highlighted much of what will be required.

The inner workings of ConnDOT are based on years of experience. It is critical, if a change in behavior is to occur, that behavior changing initiatives be introduced. If quality and change are going to be accomplished, processes that today encumber the desired outcome must be identified, measured, and mapped against current efforts, assigned goals for improvement that set high standards and promote business success, and they must be reinforced by a system of management that achieves business leadership and top performance.

All of this, when integrated into an organization, will benefit the employees and customers, and drive top performance. Training requirements need careful examination, but training alone is not enough. Automation and visionary focus on technology requirements, as well as future applications not adequately integrated into the short and long-term plan for ConnDOT, must be addressed. Adding people is a constant cry, but that should be done only after careful analysis has been completed and the level and qualifications of the talent required is in alignment with the strategic execution of the initiatives in the plan. We recommend that ConnDOT commit to a disciplined program of process improvement and that external expertise be contracted to assist in the transformation process. This introduction of practices like Six Sigma and others can be integrated when and with leadership endorsement and acceptance.

In summary:

- Strategic clarity, excitement and belief in the mission and vision are not apparent and, therefore, foster a void and pessimism across many constituent bases, starting with the senior-most leadership, through the employee base, and, further, throughout Connecticut.
- Justification and passion around what Connecticut must do, and will do (and, as a result, what we will choose not to do at this time), is a constant point of debate, hence creating a blurred vision and fostering debate on a project basis. Galvanizing support must be achieved and the commitment and direction must be clear.
- Ownership of the ultimate strategy, with associated accountability, is not easily identified due to the organizational alignment by ConnDOT today. There must be a clear understanding and acceptance of development, ownership of accountability, milestone reporting, and contingency planning.
- The TSB charter needs to be modified and its membership needs to be redirected and reconstituted to perform more of an oversight responsibility, and less of a stakeholder representation responsibility.
- Talent, not merely staffing, must be evaluated at all levels. Leadership capable of driving change and inspiring results must be infused.
- Tools, be it technology, quality improvement, or management, must be integrated and must become part of the institutional DNA of ConnDOT.

All of these observations, along with the recommendation of the other working groups, cannot be implemented without ConnDOT's recognition, acceptance, and passionate willingness to drive change. This will be no easy task, and is not short-term in nature. It will be slow, deliberate, and often frustrating. Yet, without embracing the challenge and maintaining a leadership consistency in execution, change will be insufficient and anticipated goals will be unachievable.

Report of the Working Group on Technology

Process

The Technology Working Group met both in person and through “virtual” meetings by phone and computer. Additionally, it spoke with a number of ConnDOT officials, talked separately with transportation consultants, and reviewed studies and reports prepared by or for agencies of the U.S. Department of Transportation.

Findings

Modern technology applications are critical to ConnDOT’s effective operation. While ConnDOT appears receptive to new technology, there appears to be a consensus, both inside and outside ConnDOT, that it does not utilize modern technology to its fullest.

The primary technology areas considered in this part of the report are Roadway Technology and Information Technology. Improvements in each of these areas will require several changes, including organizational adjustments, increased funding, and continued management focus. Many improvements can facilitate improved efficiency, operation, and safety, which should contribute to cost savings and more effective management and personnel utilization.

The Commission also received compelling testimony regarding:

- Predictive maintenance technologies for public transportation vehicles and infrastructure;
- Remote sensing technology to determine the condition of bridges and roads;
- And information technologies that would allow for the dynamic scheduling of public transportation systems, and the ability to communicate availability of parking in garages and other parking areas.

All these ideas are worthy of further study and consideration, but the support infrastructure for them is not in place. Thus, the Commission is not recommending their short-term adoption. Adoption of these technologies should be considered as ConnDOT is considering ways of closing the gap between its current processes and capabilities and best-in-class processes and capabilities.

Roadway Technology

Better traffic monitoring systems are needed, involving improvements in the means of both gathering and disseminating traffic information to authorities and motorists. ConnDOT needs modern and integrated traffic management systems, akin to the state-of-the-art systems in other states. There must be a more current information flow to ConnDOT’s consumers with respect to construction projects and effects; mass transit schedules and alternatives; and traffic information, to allow for efficient distribution of traffic. Information has value independent of the trip itself. Studies done in other states show that commuters will pay extra for each trip if they receive real-time information that helps them plan and manage that trip.

Recommendation: Implement a 511 telephone system and, as part of that effort, pilot a system using cell phone technology to provide more geographically comprehensive real-time traffic information for travelers while they are in their vehicles.

Other states have adopted the simple “511” number for people to get timely, accurate, and reliable travel information. ConnDOT has funding issues that have prevented it from implementing this system, but it needs to accelerate its efforts to do so.

As part of its 511 system implementation, ConnDOT needs to look at innovative approaches to helping travelers get real-time traffic information. For example, Georgia and four other states are piloting a system that uses the real-time information from the location and movement of cell phones to pinpoint areas of traffic congestion both on the major interstate and principal arterial highways, and on more heavily-traveled local roads. This system would cost a fraction of the sensor systems already in place in limited parts of the State's highway network and would provide far broader geographic coverage.

Recommendation: Improve use of the web

There needs to be improved use of the web. Examples include better traffic-cam information (real-time streaming video versus still pictures) and more precise URL references. On the current ConnDOT web site, for example, traffic and construction information often is less than fully accurate and current.

A good example of the difference of how to make the web site more user-friendly is how Iowa DOT presents information on construction-related delays. The Iowa DOT web site takes the viewer who wants road or traffic information directly to a state map that shows at one glance both the sites where there is road work going on, as well as where there are accidents, difficult driving conditions, or other road hazards. ConnDOT's textual description is not supplemented with visual information, and is therefore not as easy to use as it could be.

Recommendation: Improve ConnDOT's web-based communications system through improved use of maps and graphics to supplement text, through insuring that the information is real-time, and through implementation of streaming video technology where ConnDOT has traffic cameras.

Recommendation: Update and improve roadway technologies

ConnDOT should embrace more widespread use of modern roadway technologies and devices, including smart or coordinated traffic signals, congestion management/advisory systems, electronic signage, and variable speed limit signs. These also should be properly maintained. At some recently installed digital traffic information signs, trees have been allowed to grow and obscure the displayed information.

Recommendation: Improve quality of information about Connecticut transportation assets

Citizens should also have good information about the condition of Connecticut's transportation assets. ConnDOT should specifically identify roads, highways, and bridges in need of repair. For example, MSNBC.com has extracted information from the National Bridge Inventory and reports on its web site, state-by-state and, within a state, county-by-county, those bridges termed "structurally deficient or functionally obsolete." See msnbc.msn.com/id/20099048.

ConnDOT needs a Citizens' Representative Office to get adequate and timely information to travelers in a form and through a channel enabling them to take actions to avoid problems, or to give feedback back to ConnDOT.

ConnDOT needs to publish detailed, real-time, accurate information about the quality of the State's transportation assets.

Other Technology Applications

Some new technologies would benefit revenue collection, pollution control, urban development, or other services. Such applications carry policy important considerations that exceed transportation:

Recommendation: Study electronic tolling, and include an analysis of variable tolling.

State-of-the-art electronic tolling devices on State highways and other congestion pricing systems would improve traffic distribution, reallocate traffic to transit alternatives, and generate significant revenues without impeding traffic. Such funds could support further technology advances. The TSB has recommended that a study of electronic tolling be done. We concur with that recommendation. The study should also extend to the merits of variable pricing models, such as tolling that varies by level of congestion or time-of-day.

Recommendation: Implement intermodal fare collection technology.

Intermodal fare collection systems, such as a one-fare payment for commuters who will use both a bus and a train, will make it easier for commuters to use public transportation.

ConnDOT has taken steps recently to improve the centralization and coordination of technology efforts, and further action in this regard is endorsed. It also evidences a willingness to embrace new technologies. Critical to new technology adoption is care in exactly what, how, and when investments should be made, together with ongoing attention to effective maintenance and utilization.

Making improvements to technology almost always requires upfront increased funding and management focus. But many improvements can themselves facilitate improved efficiency, operation, and safety, which should contribute to cost savings and more effective management and personnel utilization.

The Present Organization of ConnDOT Technology

There are two main parts of ConnDOT's Information Technology department: the Operations Division and the Applications Division.

The Operations Division ensures that technology infrastructure and Business Applications are available 24 hours a day, 7 day per week, and 365 days per year. It is responsible for hardware and software upgrades, and IT disaster recovery. It has four sections: The Data, Voice, and Video Networking Planning and Support unit; the Technical Planning and Customer Support unit; the IT Engineering Support unit; and the Computer Center Operation unit.

The Applications Division provides support and integration services and standards, and manages ConnDOT software deployment. It has three sections: The Administration unit; the Transportation Applications unit; and the Administrative Systems unit.

Technology as a Part of the Culture of ConnDOT

Improved, centralized, and better coordinated Information Technology systems lead to better information processing, communication, standardization, decision-making, engineering, management, prioritization, and efficiency. The centralization effort should include information technology functions and initiatives supported by other areas within ConnDOT. ConnDOT needs a dedicated professional with a clear mandate to insure that ConnDOT is continually benchmarking against proven best-in-class transportation-related technologies, as well as technologies that result in more effective government operations, but this individual would not have the broad-based responsibilities of a chief technology officer.

Recommendation: Do not put new technology into place without full commitment to the human and financial resources necessary to maintain, support, and upgrade it.

For new technology to be used for ConnDOT's maximum benefit, it must become an integral part of ConnDOT's culture. The technology cannot be seen as an "add-on," but a natural and necessary part of how ConnDOT partners with stakeholders.

When new technology is introduced, resources – both financial and human – must be allocated to support and maintain it. For example, time-sensitive ConnDOT web site information must constantly be kept up-to-date. Processes must be in place to transfer information to and from the traveling public quickly and accurately regarding delays or other issues. Even relatively low-tech matters such as making sure that electronic signs operate properly and are easily visible must be part of an overall technology strategy.

Introducing technology can often mean changing familiar processes, and that can be difficult in an entrenched bureaucracy. Technology change thus must be part of a larger culture of accountability at ConnDOT, in which mission and strategy are pursued department-wide and all employees have a stake in its success.

Next Organizational Steps

Technology adoption needs to be done in a timely and smart manner, taking into account standardization, centralization, coordination, and accepted best practices. ConnDOT should strive for a cutting-edge reputation, but not be so far ahead of the curve that it is taking excessive risks. New technology applications should be supported on the basis of clear operational improvement and cost effectiveness, not simply newness. Prior to committing funds or resources, proposed new technology investments should be aired widely within ConnDOT and benchmarked with others (including retained experts, where appropriate).

Recommendation: Actively pursue measures to assure that new technology alternatives are constantly considered and implemented to improve the overall operation, efficiency, and effectiveness.

Those measures should include:

- Appropriate personnel training in new technology alternatives;
- Organizational identification of “technology champions” with influence and authority to implement coordinated change, yet tempered with the understanding that technology is generally a tool, not an end unto itself;
- Giving adequate consideration to technology-related issues in all short and long-term agency planning as well in strategic decision making.
- Inclusion of technology-related goals in employee assessments and rewards;
- Funding appropriations directed specifically for new technology applications;
- Regular infusion of personnel focused and expert in new technology;
- Focused attention on updating and maintaining installed technologies;
- Constant and objective investigation, consideration, and implementation of new technology from outside sources – even if that entails making existing methods obsolete;
- Systematic and cultural assurances to avoid bias for or against any particular technology;
- Regular and objective monitoring and assessment of the implementation, effectiveness, maintenance, and support of new and existing technologies - utilizing user feedback whenever possible;
- Periodic and discreet use of independent technology consultants;
- Regular benchmarking of technology effectiveness versus other states; and
- Promotion of a departmental culture that embraces and rewards new technologies, methods, and practices.

Report of the Working Group on People and Culture

Process

The People and Culture Working Group met seven times from September 14 to November 7, 2007. The individuals listed below were invited to various work group meetings to provide their expertise to the group:

- ConnDOT Commissioner Ralph Carpenter, now recently retired
- ConnDOT Human Resource Administrator Vicki Arpin
- Former ConnDOT Commissioner Emil Frankel
- Federal Highway Administrator Bradley Keazer

Union leaders representing ConnDOT employees were invited to attend a meeting with the group to discuss employee survey results. Those who participated in the discussion were:

- Paul Krell, Jr., President, Administrative and Residual Employees Union
- Ronald McLellan, President, Connecticut Employees Union Independent
- Caria Boland, American Federation of State, County and Municipal Employees
- Christina Burkert, Vice President, Protective Services Employees Coalition

The Organizational Assessment Survey (OAS) was given to all ConnDOT employees. Sixty-three percent completed it. The Contractor/Consultant Survey was sent to all contractors and consultants on the ConnDOT pre-qualified list. Twenty-five percent participated.

Other data collected and reviewed by the group included:

- DOT Employee Retirement Eligibility by Bureau
- Employment vs. Funding Charts
- ASHTO Oasis Consulting Report, NCHRP Project 20-24(42) "Guidelines for State DOT Quality Management Systems," June 2006.

Findings

The findings listed below were developed through the testimony, discussions, surveys and data compiled by the Working Group.

I. Culture

- a. The OAS showed that ConnDOT has strong human resource fundamentals. Pay and benefits, the amount of work, the standing of the organization in comparison to other places to work, the help and guidance received from supervisors and each other, the skills and knowledge of the workforce, the ability to balance work and life responsibilities are areas perceived by employees and management alike as strengths of the organization.
- b. The OAS showed that there is pessimism about strategic planning and the use of performance measures in the organization. The Contractor survey showed that this belief is held by vendors and other stakeholders as well.
- c. Testimony and surveys showed that there is not an effective system of communicating the essential mission of ConnDOT and the expectations for the employees or managers. As a result, employees are aligned with their Bureaus and not with an overall ConnDOT mission.
- d. The opinion of those responding to the Contractor/Consultant Survey was that risk taking and innovation are not respected, rewarded or recognized. Implicit in their feedback is the conclusion that those who block needed change or innovation are not given appropriate performance feedback, or, even if feedback is given, it is not acted upon.

- e. Employees, managers, and vendors responding to the surveys feel that red tape and centralized decision making are the rule, resulting in lack of accountability and inefficiency.
- f. All sources reported that employees and managers are afraid to make decisions or take risks to be more efficient.
- g. All sources reported that neither employees nor managers are recognized or rewarded for providing high quality products or services, or punished for failing or refusing to do so.
- h. The OAS showed that employees think ConnDOT is an organization where there is not much receptivity for change or continuous improvement. Management responses showed that they seem more pessimistic about this than staff.
- i. The OAS showed that while there seems to be a high commitment to staying with the organization, a higher percentage of managers have more thoughts about leaving than do bargaining unit members.
- j. The OAS showed that employees believe decisions made regarding disciplinary actions and work distribution are unfair.

II. People

- a. Testimony and data revealed that many experienced staff accepted the early retirement program offered in 2003. This resulted in many promotions of inexperienced staff into supervisory and management positions without appropriate training or knowledge.
- b. Testimony and data showed that the employment base of ConnDOT is aging rapidly. Retirement eligibility data for the DOT workforce showed that:
 - 12.8 are eligible to retire now
 - 20.9 are eligible in two years
 - 34.5 are eligible in five years

Within the Engineer I Positions:

- 16.7 are eligible now
- 22.5 are eligible in two years
- 31.4 in five years

These findings indicate that a large exodus may occur in the near future, particularly in 2017 when State retirement benefits are renegotiated.

c. Over the past two years, the Governor has recommended, and the General Assembly has approved, the largest investment in the State's transportation system in more than two decades. While there has been authorization for more employees to be hired in ConnDOT, there does not appear to be an overall plan relative to workforce skills and needs. In particular, hiring and recruitment of Engineers is challenging and should be a clear focus of DAS and ConnDOT.

The Department should work, as needed, with other State agencies to streamline the hiring process.

Recommendation: There needs to be an infusion of talent at ConnDOT's top management level who can help the new Commissioner lead change.

The Commissioner needs to combine this talent with "Champions" (for change), internal candidates that have a deep knowledge of ConnDOT. We recommend that the Commissioner establish a Leadership Council. Implicit in this as well is a recommendation that the Commissioner set an example for all ConnDOT managers at all levels by using rigorous performance management processes, and acting upon them to take out people who cannot perform

according to standards. As Jim Collins wrote in his book *From Good to Great*, a landmark study in successful change management in 11 organizations: “We expected that good-to-great leaders would begin by setting a new vision and strategy. We found instead that they first got the right people on the bus, the wrong people off the bus, and the right people in the right seats – and then they figured out where to drive it.” (page 13)

This quote makes the point that the most important task of the new Commissioner and his or her senior team will be to upgrade organizational talent, and align it to organizational goals. When employees are reporting that strong performance is not rewarded or recognized, and weak performance is not punished, they are communicating failure that starts at the senior leadership level.

Former Commissioner Carpenter and the executives he brought in have started the difficult process of incorporating performance management into ConnDOT, but it is a long journey from where ConnDOT is today to where it needs to be.

Recommendation: Once the Leadership Council is formed, the Commissioner, with input from important stakeholders, should develop a clear vision of the strategic priorities that all employees can understand, and work toward these goals.

This should be done by:

- a. Developing metrics of how ConnDOT will measure itself.
- b. Empowering managers and employees to make decisions, and holding them accountable for the achievement of the metrics.
- c. Transferring appropriate decision-making authority and accountability from headquarters to the field.
- d. Developing a strong communication plan to include communication directly with employees regarding strategic priorities.
- e. Establishing a long range plan for skills and needs of the work force. Focus in particular on succession planning. Before this long-range plan could be put into place, there needs to be a complete inventory of existing skills, as well as the skills that the ConnDOT strategy would require for the future. Some needed skills have been identified in this Report, but others would be clearly surfaced as a result of the analysis that would come from a skills assessment.
- f. Improving ConnDOT brand by publishing metrics to all stakeholders (daily “dashboard” on ConnDOT website and Quarterly report). Focus on finite goals and celebrate successes.

Recommendation: Implement a system of continuous improvement.

Some 33 other DOT’s use Baldrige, NQI or NPHQ. ConnDOT should:

- a. Develop a program of recognition and reward for employees for efficiency and innovation.
- b. Promote practice of senior managers to benchmark against other DOT’s and State departments.
- c. Develop structured feedback loops in which input from employees and other stakeholders are carefully considered.
- d. Take follow-up surveys of employees at 18-month intervals. Develop an action plan around one or two major issues that are easily understood by all. Evaluate managers on whether employees feel that these issues have been heard and acted upon.
- e. The progress of the strategic plan, development of the metrics, and the results of the system of continuous improvement should be regularly reported to the Leadership Council.

The testimony and the surveys from various sources elicited from the working group’s research showed that employees are not recognized or rewarded for providing high quality products or services, and that employees and vendors alike felt that there is red tape and delay in ConnDOT processes. As a result of strategies used by several other DOT’s to improve their performance and stakeholder satisfaction (See the Oasis Consulting Report,

by AASHTO), we recommend that ConnDOT develop a clear set of strategic priorities, with attendant metrics and that it use a form of Kaizen (continuous improvement) to streamline its processes to achieve these priorities. Finally, we encouraged ConnDOT to publish these metrics, so that stakeholders may see progress toward these goals.

The Kaizen method of continuous incremental improvement consists of the elements of quality measurement, involvement of all employees, willingness to change, and disciplined effort and communication. It involves the study of repetitive processes with an aim to increase customer satisfaction. The results are elimination of waste and inefficiency, improvement of employee morale and standardization. Adoption of Kaizen will also recognize, empower, and legitimize champions of change inside the organization, and deal with one of the fundamental issues the Survey highlighted: the perception that there is very little benefit and high risk for suggesting improvements and changes to ConnDOT's method of operation.

Quality and continuous improvement also have one other critical element: the "outside-in" look at ConnDOT processes. ConnDOT has to define the quality of its processes by what is important to the citizens of Connecticut, not by standards that it decides in isolation.

A good example of how differently ConnDOT must operate if committed to customer-driven quality is the way it handled the recent decision relative to the catenary line project at the rail stations. ConnDOT project leaders assumed that what was best for the public was to have as little cumulative delay as possible every day, which caused them to decide that rail travelers should walk to the opposite side of several stations, even if it meant waiting outside for trains during the winter months.

Instead, it became clear that rail travelers were willing to accept some delays to have the ability to stay on the side of the platform adjacent to the stations. Since ConnDOT did not have a customer outreach in its decision processes, it learned of this customer preference via a press release from the Governor, whose elected officials received a large number of complaints from irate citizens.

The working group felt strongly that these recommendations require committed and consistent structure and direction from the top. Because state agency leadership changes frequently, a continuous improvement culture must be institutionalized as a high priority of day-to-day business. Based on the study of the methods used by other Departments of Transportation, we believe that these recommendations of accountability, transparency and quality measurement would improve the product and services of ConnDOT, and, thus, would increase the satisfaction of the employees and other stakeholders with the work of ConnDOT. Consistent with the recommendations of the Organization and Procedures Working Group, we believe that a Chief Operating Officer with a track record of implementing quality and continuous improvement in large governmental organizations is an important first step.

Recommendation: Commit the appropriate resources and responsibilities to training and knowledge capture of the workforce.

- a. Focus on management skills training. (For example, re-establish the executive management program and/or explore the use of the Connecticut Quality Control Council for worthy programs that could be utilized.)
- b. Establish a knowledge management program to capture and preserve knowledge of the most experienced employees and managers.
- c. Establish an executive leadership program to develop ConnDOT "rising stars."
- d. Increase the training staff from two people to the appropriate level.
- e. Train a significant number of managers and line employees in the adopted method of continuous quality improvement.

Recommendation: Make the values of ConnDOT crystal clear.

- a. Communicate the ethics requirements extensively and frequently.
- b. Train employees on structure and enforcement of compliance (ombudsman, hotline, etc.)
- c. Staff internal audit appropriately.
- d. Reflect the importance of these values by decisions made in hiring, promotion, performance management, and disciplinary actions.

Report of the Working Group on Finance and Funding

As the Committee on Finance and Funding conducted its research and analysis in recent months, a large amount of relevant material was received, both from within and from outside the state. The scope and the importance of this material meant that considerable time would be required to analyze it properly.

What this material demonstrated was the following:

- Departments of Transportation around the country, as well as the state, regional, and local governments they serve, use or are considering the use of a broad range of funding mechanisms, each with different strategic, structural and operational implications for those Departments of Transportation. Other states have recognized that this is a sufficiently complex subject to have specifically dedicated a separate phase of transportation project activity to it.
- The current assumptions on funding needs are based on ConnDOT's current strategic and operating philosophy. If different points of view get credibility at a senior level, assumptions on funding requirements may change. For example, if ConnDOT seriously incorporates smart growth, transit-oriented development, bicycle and pedestrian travel, demand reduction and other strategies into its thinking, it is possible that the funding gap may be considerably lower than the \$3.27 billion ConnDOT has put in its 2007 Master Transportation Plan.
- There may be creative ways of accessing a wide range of federal and state funding sources if ConnDOT has a liaison both in Hartford and Washington dedicated to regular dialogue with state and federal agencies, as well as the Connecticut Congressional delegation. Other states are using federal non-transportation funding sources in very creative ways to compensate for the shortfall in federal transportation funding sources.

The working group recommends that it remain in place after the first phase of the work of the Commission is finished.

Because adequate funding of ConnDOT projects is essential to their success, further work by the Working Group on Finance and Funding needs to be the central part of the second phase of the Commissions' work. We suggest that the Governor appoint a small group chaired by OPM Secretary Genuario to focus specifically on the finance and funding implications of this report.

Report of the Working Group on Mission

A mission statement is an organization's "call to arms," a reflection of its reason to be. It provides a clear sense of the organization's place in the world, what it does, and whom it serves. As such, it both reflects and shapes the organization's identity. For that reason, mission statements, as well as the goals or principles that inevitably accompany such statements, are best crafted by the organization itself as an outcome of a deliberate process that involves the active participation of staff and management at all levels.

The present ConnDOT mission statement is: "It is the mission of the Connecticut Department of Transportation to provide a safe, efficient, and cost-effective transportation system that meets the mobility needs of its users."

The mission is further explained in nine goals:

- To strive to identify, analyze, and continually improve the way we do our work so that we may deliver better products and services, and improve our work environment.
- To operate the Department with maximum efficiency, so as to create additional resources for investment in the transportation infrastructure.
- To maintain the transportation system to ensure continued high levels of safety and mobility.
- To maximize the utilization and efficient operation of existing transportation assets.
- To focus our human and financial resources on priorities established through an ongoing, analytical planning process that continually asks the question, “What should the DOT do next to fulfill the Mission?”
- To invest in projects that ensure safety, maintain the existing transportation infrastructure, increase the productivity of the transportation system, promote economic development, and provide necessary capacity enhancements.
- To utilize all available federal and state funds.
- To seek to protect and enhance the natural environment as we develop transportation improvements.
- To engage stakeholders in a consultative process from the earliest stages of project development.

Recommendation: Use mission statements from other states’ DOT’s as a starting point for creating a new ConnDOT mission statement.

The Working Group conducted research on mission statements and goals that have been adopted in other states, the most notable of which are in Florida, Vermont, Oregon, Rhode Island, Virginia, California and Michigan. Florida’s mission, for example, is “The department will provide a safe transportation system that ensures the mobility of people and goods, enhances economic prosperity and preserves the quality of our environment and communities.” Vermont has a vision: “a safe, efficient and fully integrated transportation system that promotes Vermont’s quality of life and economic wellbeing” as well as a mission: “to provide for the movement of people and commerce in a safe, reliable, cost-effective and environmentally responsible manner.” These are supplemented by several specific goals in the areas of safety, excellence, planning, and preservation.

The Working Group recommends that ConnDOT study these mission statements and goals, as well as any others that look beyond mobility to recognize the broader purpose that ConnDOT must serve to encourage economic development and responsible growth, while preserving valuable natural resources and respecting the unique character of our communities by designing, building and maintaining a safe, efficient, cost-effective and fully integrated multi-modal system.

The Working Group also noted that the Transportation Strategy Board’s 2007 Annual Report articulated a series of guiding principles and strategies that provide a strong basis for the task ahead.

Given that the process of developing a mission statement can help solidify a unified sense of purpose among staff and management that will guide the organization’s services, projects and products, the Working Group concluded that it was appropriate to allow ConnDOT itself to define its mission and goals. The Group also sought to encourage the new Commissioner to lead an effort to redefine ConnDOT’s mission as soon as possible and when completed, to widely publicize the mission statement and goals – internally and externally – as a way to create and maintain a uniform sense of purpose.

Recommendation: Once a new mission statement is created, fulfill that mission.

It may seem self-evident that once a mission statement is crafted, the Department should live up to it. But as noted above, although the working group noted deficiencies in ConnDOT’s present mission statement, it must be said that the biggest deficiency is ConnDOT’s inability to fulfill the mission it has already set for itself. For example, one of its stated goals is “To engage stakeholders in a consultative process from the earliest stages of project development.” As other parts of this Report make clear, ConnDOT is far from fulfilling that goal.

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APPENDIX 1

Smooth and Unrestricted Roads and Bridges

Percent of deficient bridges on major highways

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

Purpose of the Measure:

This measure tracks progress toward improving the condition of Missouri's bridges on major highways. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

Measurement and Data Collection:

The major highway system is defined as all routes functionally classified as principal arterials. By definition, the principal arterial system provides for statewide or interstate movement of traffic. Examples include the Interstate System or most U.S. routes such as 63, 54 or 36.

In urban areas, principal arterials carry traffic entering or leaving the urban area and serve movement of vehicles between central business districts and suburban residential areas. Examples include Business 50 (Missouri Blvd.) in Jefferson City, MO 740 (Stadium Blvd.) in Columbia and Route D (Page Ave.) in St. Louis.

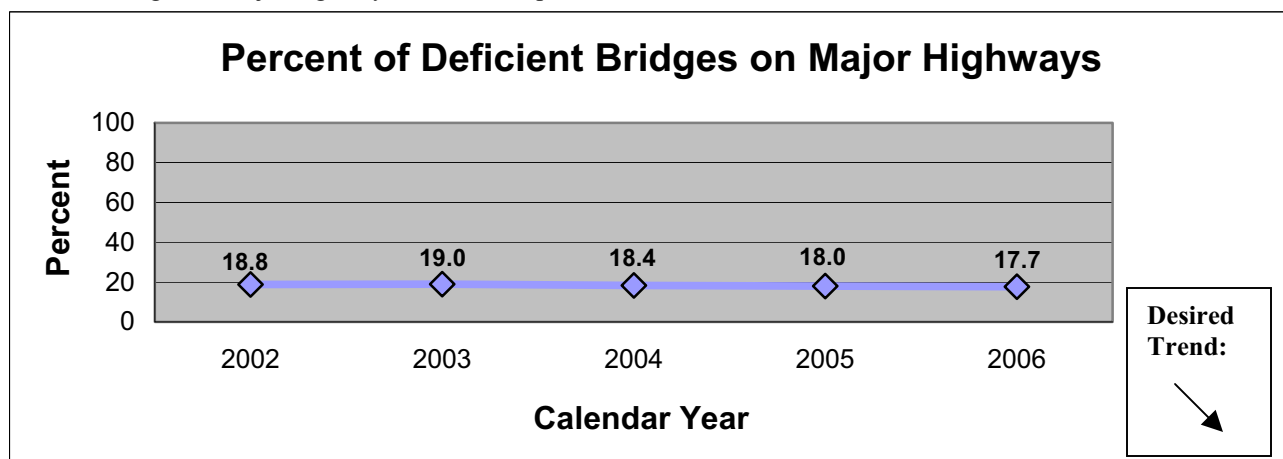
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently 3,317 bridges on major highways.

This is an annual measure. Data is updated each April based on the prior year's inspections.

Improvement Status:

Bridge conditions on major highways have shown a moderate improvement. The percent of deficient bridges has been reduced to 17.7 percent over the last five years as a result of increasing funds directed to care for the existing highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. While most of these bridges are located on the minor highway system, a benefit to bridges on major highways is also anticipated.



Smooth and Unrestricted Roads and Bridges

Percent of deficient bridges on minor highways

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

Purpose of the Measure:

This measure tracks progress toward improving the condition of Missouri's minor highway bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

Measurement and Data Collection:

The minor highway system consists of all routes functionally classified as minor arterials or collectors. These routes serve more local transportation needs and include highways commonly referred to as lettered routes, such as Route A, Route C and Route DD. The public sometimes refers to these routes as farm-to-market roads.

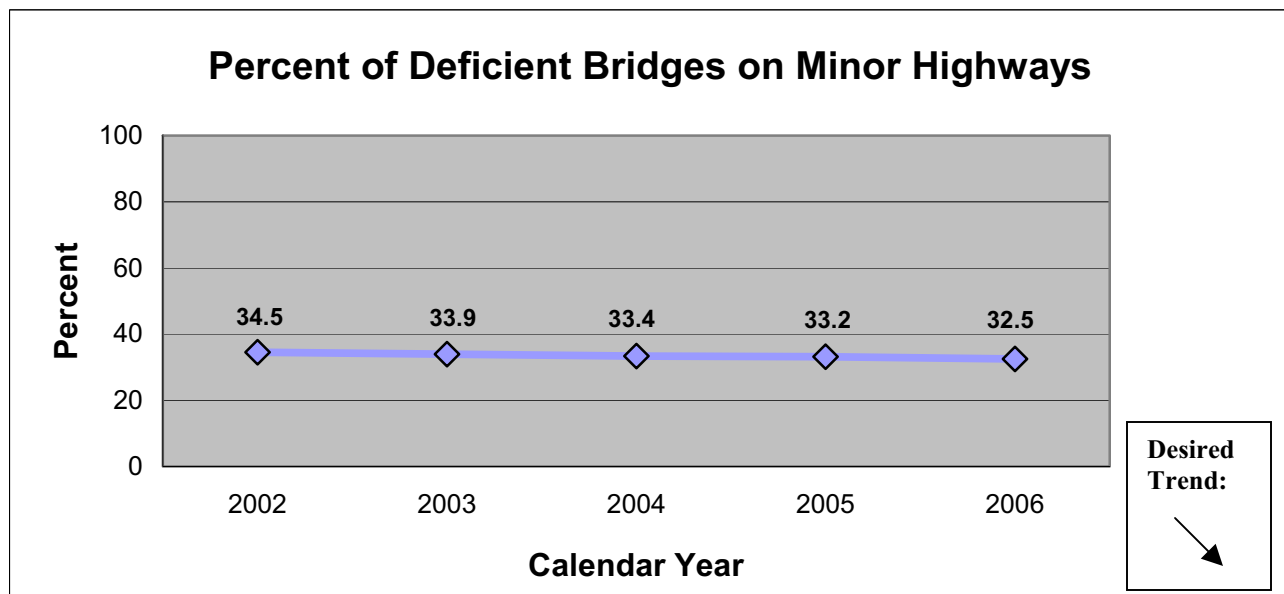
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently 6,923 bridges on minor highways.

This is an annual measure. Data is updated each April based on the prior year's inspections.

Improvement Status:

Bridge conditions on minor highways have shown a moderate improvement. The percent of deficient bridges has been reduced to 32.5 percent over the last five years as a result of increasing funds directed to care for the existing highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. Most of these bridges are located on the minor highway system. A substantial decrease in the number of deficient bridges is expected to occur with the completion of this program.



Smooth and Unrestricted Roads and Bridges

Number of deficient bridges on the state system (major and minor highways)

Result Driver: Kevin Keith, Chief Engineer

Measurement Driver: Dennis Heckman, State Bridge Engineer

Purpose of the Measure:

This measure tracks progress toward improving the condition of Missouri's bridges. The public has indicated the condition of Missouri's existing roadway system should be one of the state's highest priorities. MoDOT places a high priority on increasing the quality of bridges on the state system.

Measurement and Data Collection:

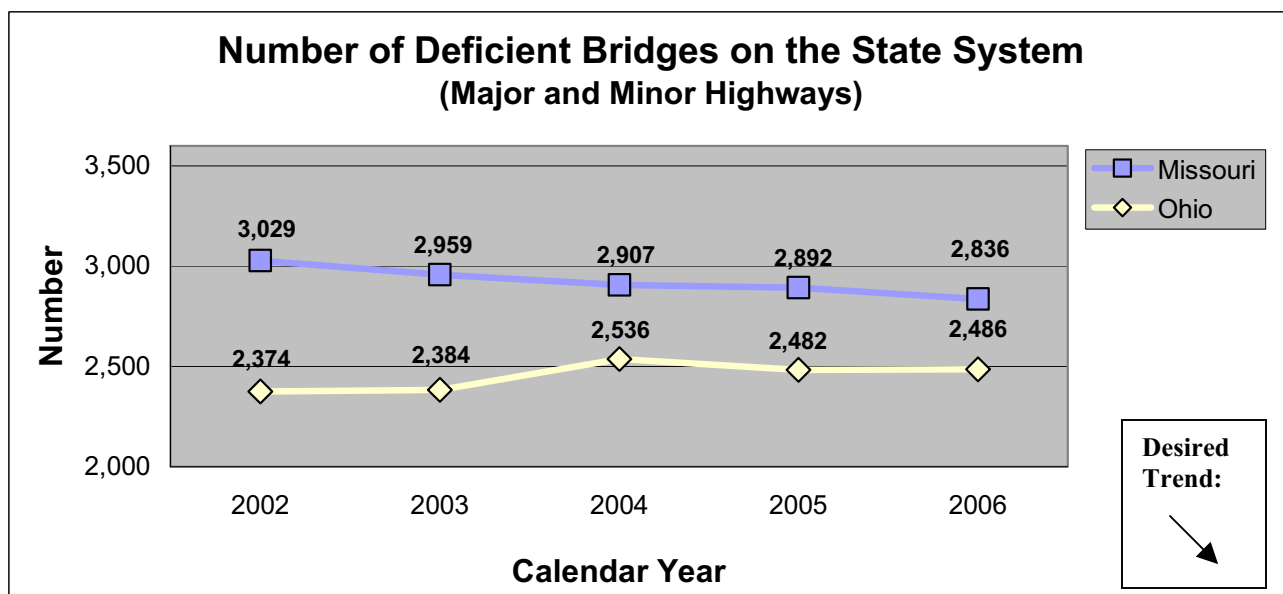
A bridge is considered deficient if it is either structurally deficient (SD) or functionally obsolete (FO) as defined using Federal Highway Administration criteria. A SD bridge is in poor condition or has insufficient load capacity when compared to modern design standards. A FO bridge has poor roadway alignment or has clearance or width restrictions that no longer meet the usual criteria for the system it serves. MoDOT staff inspects all state-owned bridges. There are currently a total of 10,240 bridges on the state highway system.

This is an annual measure. Data is taken from the National Bridge Inventory. Missouri data is available in April of each calendar year and is updated at that time. However, the data for other states is not published until the following year.

Improvement Status:

Bridge conditions on Missouri highways have shown a moderate improvement in the last five years as a result of increasing funds directed to care for the existing highway system. Currently, 2,836 bridges are considered deficient on the state highway system. A minimum of \$10 million per year is dedicated to preventive maintenance activities on major river crossings and other structures more than 1,000 feet in length.

The Safe & Sound bridge improvement program will address more than 800 of the state's most critical structures. This program will repair or replace these bridges over a five-year period and emphasize their maintenance at an acceptable level for an additional 25 years. A marked improvement in the number of deficient bridges will occur with the completion of this program.



* Source for Ohio, "Better Bridges" November 2007, for data collected in calendar year 2006.

Bridge Sufficiency Ratings

The sufficiency rating formula is a method of evaluating factors which indicate a bridge's sufficiency to remain in service. The result of the formula is a percentage in which 100 percent represents an entirely sufficient bridge and zero percent represents an entirely insufficient or deficient bridge. The sufficiency rating is never less than 0 or more than 100.

States annually submit to the Federal Highway Administration (FHWA) all of the required information for each bridge. The FHWA uses these numbers to determine the sufficiency rating.

Many factors are included in the ratings (see Figure 1). The sufficiency rating doesn't necessarily indicate a bridge's ability to carry traffic loads. It helps determine which bridges may need repair or replacement, not which bridges could collapse.

A bridge's sufficiency rating affects its eligibility for federal funding for maintenance, rehabilitation, or replacement activities. For bridges to qualify for federal replacement funds, they must have a rating of 50 or below. To qualify for federal rehabilitation funding, a bridge must have a sufficiency rating of 80 or below.

Glossary of Sufficiency Rating Factors in Figure 1

Approach Roadway Alignment – This item identifies bridges which don't function properly or adequately due to the alignment of the approaches.

Approach Roadway Width – The normal width of usable roadway approaching the bridge, including shoulders that are structurally adequate for all weather and traffic conditions consistent with the nature of the roadway.

Average Daily Traffic – The average annual daily traffic volume crossing the bridge.

Bridge Roadway Width – The width of the bridge deck surface from curb to curb.

Culvert – Primarily a drainage structure, pipe or box section below and independent of the road surface. Its usual purpose is to let water pass under a road, railroad or embankment.

Deck – The part of a bridge which directly supports vehicles and pedestrians and transfers the loads to the superstructure.

Deck Condition – Surface and structural condition of the bridge deck.

Deck Geometry – A computed rating comparing: a) the number of lanes and the Average Daily Traffic and Bridge Roadway Width, and b) the functional classification and minimum vertical clearance over the bridge. The lowest rating for the two measurements is used.

Defense Highway – Is the bridge on the National Highway System?

Detour Length – The added distance motorists must travel on a state route detour if the bridge had to be closed.

Inventory Rating – A capacity rating that results in a load level that can safely use the bridge indefinitely. The Operating Rating results in the maximum permissible load level to which the bridge may be subjected.

Lanes on the Structure – The number of through lanes crossing a bridge. Full-width turning lanes and transition lanes are not included.

Structural Condition – The level of service the bridge provides and how it compares to a new bridge built to current engineering criteria for the type of road.

Structure Type – The primary materials and design type of the bridge superstructure.

Substructure – The parts of a bridge, including abutments and piers, which support the superstructure.

Superstructure – The parts of a bridge which carry the traffic load and pass that load to the substructure.

Underclearances – The height of the underside opening of a bridge that passes over a road or railroad.

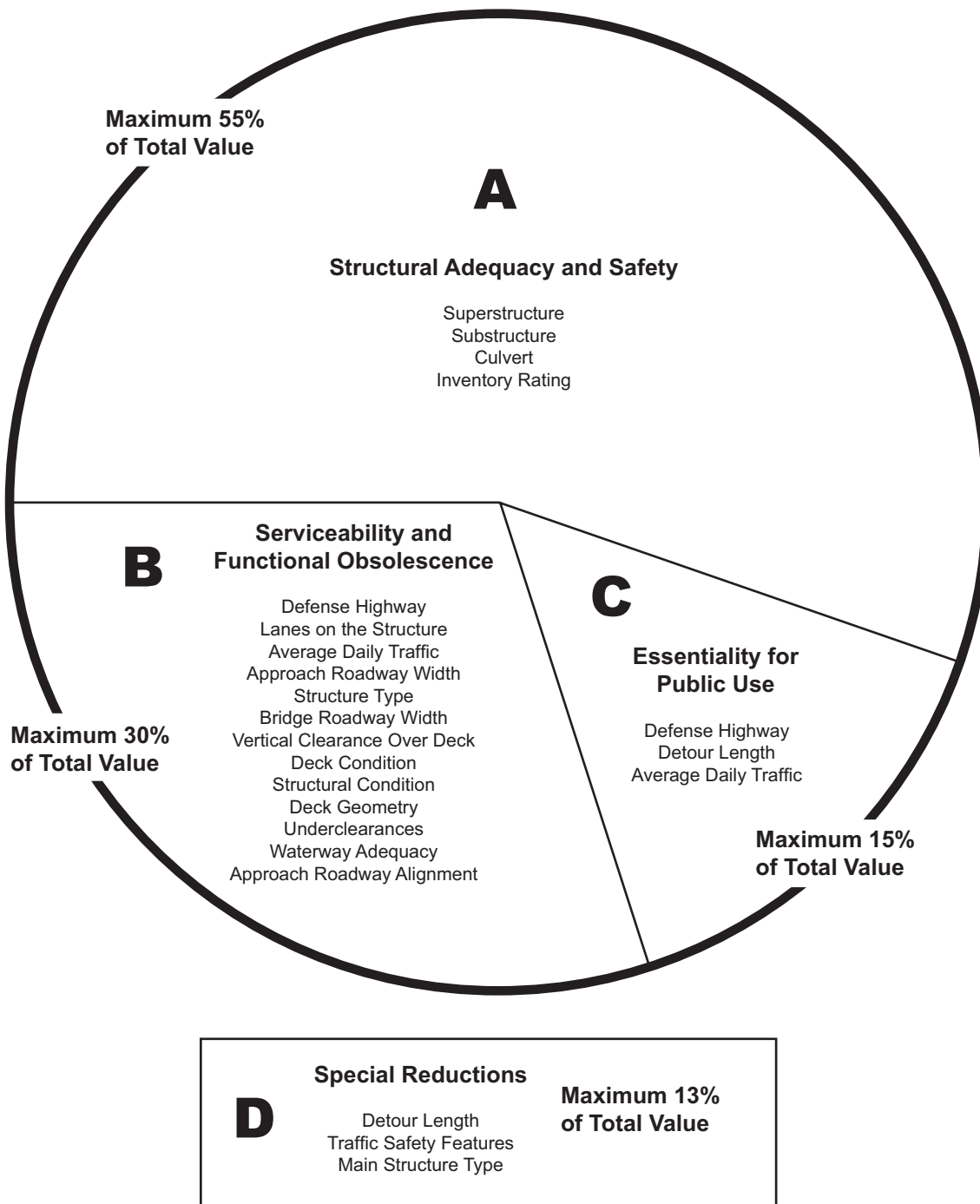
Vertical Clearance over Deck – The height of the underside of structures that may cross over the bridge deck.

Waterway Adequacy – The ability of the channel under the bridge to carry water in a flood. This item also considers the potential for floodwaters to overtop the bridge and the potential inconvenience to travelers.

Figure 1

Summary of Sufficiency Rating Factors

$$\text{Sufficiency Rating} = A + B + C - D$$



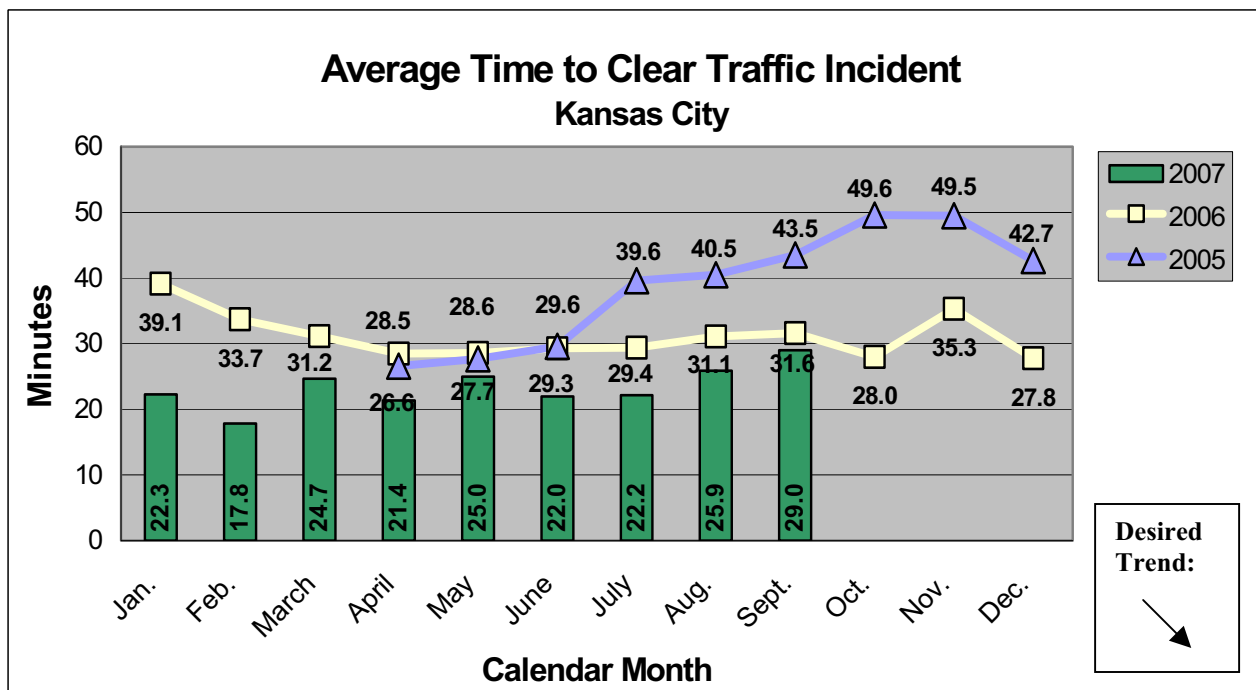
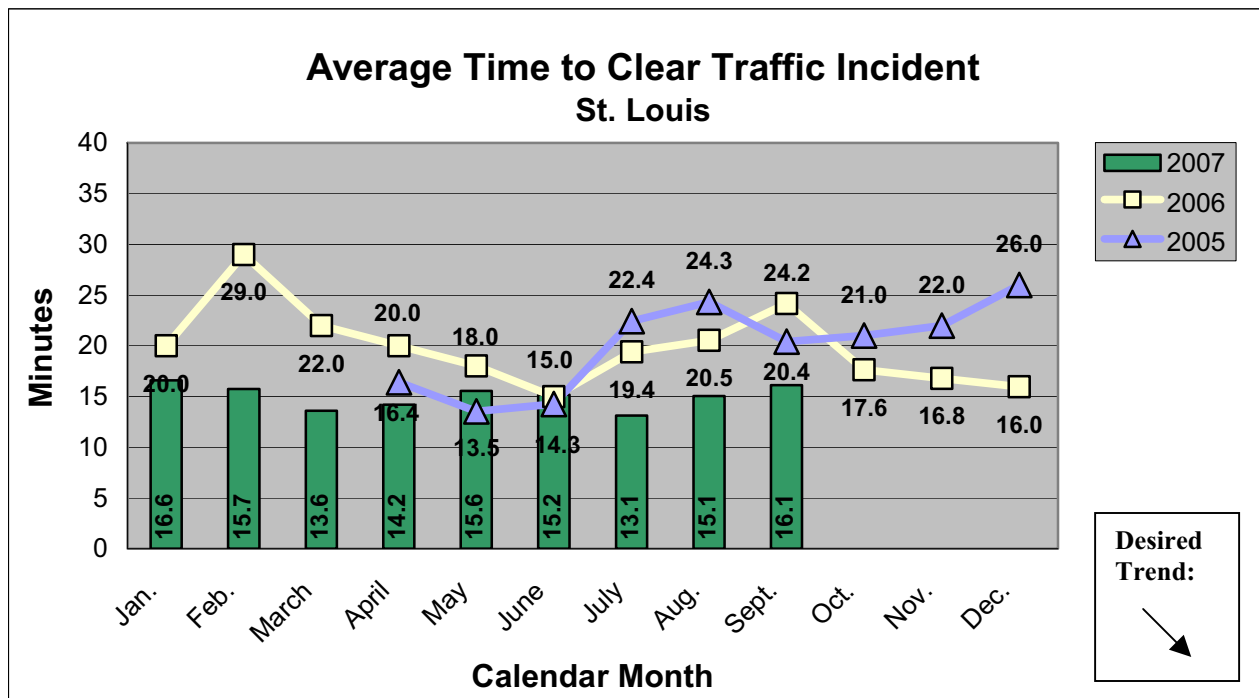
Structurally Deficient/Functionally Obsolete Structures by County

As Of 8/6/2007

County	Dist/ Area	Bridge #	Insp Freq	Year Built	Route	Structure Type	Feature Crossed	ADT	SD/ FO Status	FO Sufficiency Rating	Last Routine Inspection	Last Frac Crit Inspection	Last Underwater Inspection
ANDERSON													
	42	0002-B0011	2	1954	U 169	R IS C	ABANDONED ATSF RR	2730	SD	26.4	2/22/2006		
* KA-0706-01 Replace 2010													
	42	0002-B0016	1	1954	K 31	S BM S	KENOMA CREEK	370	FO	60.3	2/6/2007		2/20/2002
	42	0002-B0018	2	1912	K 31	R CB	ELM CREEK DRAINAGE	575	FO	76	2/22/2006		2/20/2002
	42	0002-B0032	2	1978	K 31	WBM C	ELM CREEK	440	FO	92.8	2/22/2006		2/20/2002
ATCHISON													
	11	0003-B0004	2	1955	U 59	R FB	RS1290	3970	FO	66.9	6/8/2005		
	11	0003-B0013	1	1938	U 59	S DT C	MO RIV, MOPACRR,RD	9080	SD	17.7	6/21/2006	10/7/2005	8/26/2005
* K-8238-02 Replace 2009													
BARBER													
	51	0004-B0004	1	1941	U 160	R DGS	BITTER CREEK	515	SD	47.5	11/7/2006		10/31/2001
* K-7448-01 Replace 2007													
	51	0004-B0006	1	1941	U 160	R DGS	CEDAR CREEK	515	SD	46.6	11/7/2006		8/6/2002
* K-7448-01 Replace 2007													
	51	0004-B0010	2	1937	U 160	S BM C	ELM CREEK	1860	FO	62.2	9/21/2005		10/30/2001
* KA-0205-01 Deck 2006													
	51	0004-B0030	2	1942	K 2	R IS C	LITTLE MULE CREEK	885	FO	48.6	9/21/2005		9/16/2003
* K-9586-01 Overlay, Exp Jnt 2005													
BARTON													
	54	0005-B0015	2	1950	U 281	R FB	DRY WALNUT CREEK	5640	FO	64.9	9/12/2006		
	54	0005-B0018	2	1950	U 281	R DGH	WALNUT CREEK	3730	FO	76.2	3/6/2007		3/6/2007
	54	0005-B0028	2	1935	U 281	R CB	SELLENS CREEK	1110	FO	58	9/12/2006		
	54	0005-B0029	2	1935	U 281	R FB	SELLENS CREEK	1110	SD	43.9	9/12/2006		

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APPENDIX 2

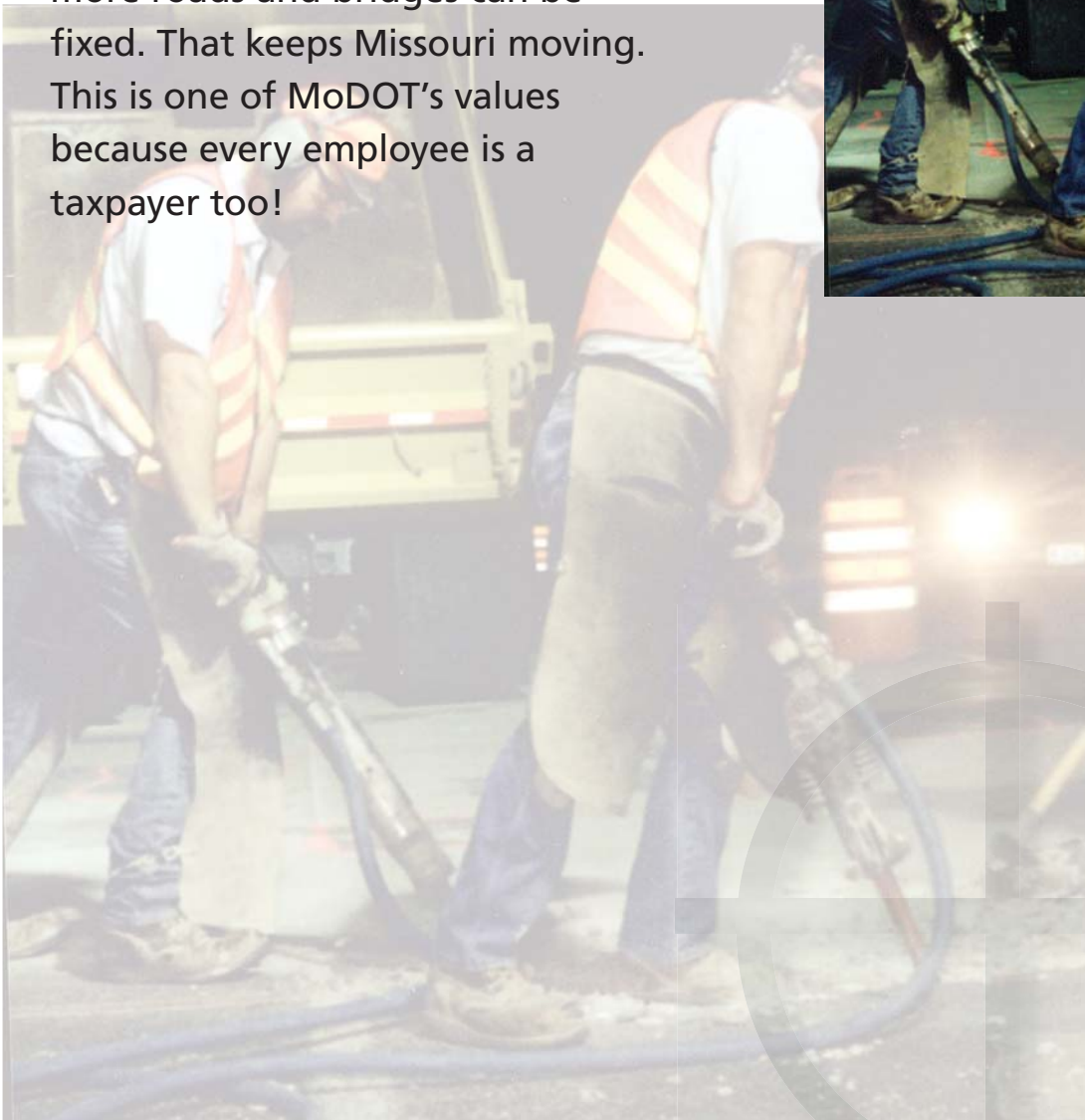


APPENDIX 3

Best Value For Every Dollar Spent

*Tangible Result Driver – Roberta Broeker,
Chief Financial Officer*

Providing the best value for every dollar spent means MoDOT is running its business as efficiently and effectively as possible. A tightly managed budget means more roads and bridges can be fixed. That keeps Missouri moving. This is one of MoDOT's values because every employee is a taxpayer too!



Best Value for Every Dollar Spent

Number of MoDOT employees (converted to full-time equivalency)

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

Purpose of the Measure:

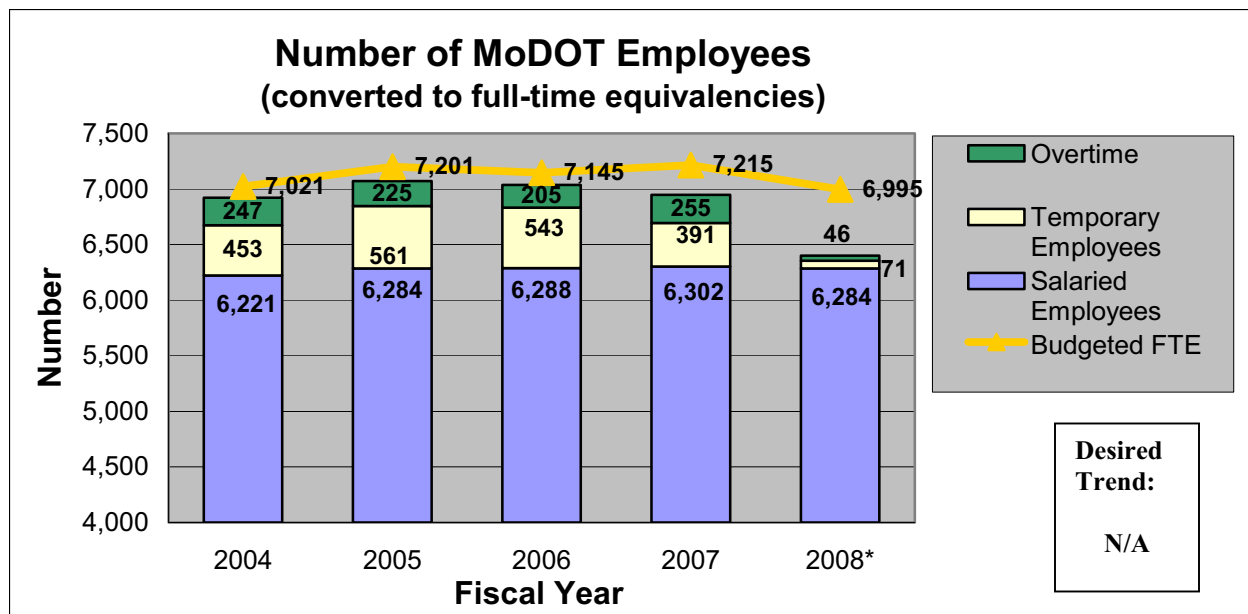
This measure tracks the growth in the number of employees within the department. This measure converts salary dollars paid to temporary and salaried employees, as well as the amount paid for overtime worked, to full-time equivalency. In order to convert these numbers to FTEs, the total number of hours worked is divided by 2080. Overtime includes both salaried and wage employees.

Measurement and Data Collection:

The data is collected and reported each quarter of the fiscal year. The data is a high-level view of overall staffing at MoDOT in relation to authorized positions that could be filled.

Improvement Status:

The chart for this measure has changed beginning fiscal year 2008. MoDOT managers now have increased flexibility in how they spend personal services dollars and are no longer forced to keep salaried employees within an authorized headcount. Therefore, the chart will now compare actual expenditures to budgeted FTEs. Comparing the first quarter of FY 2008 to the first quarter of FY 2007, the number of salaried employees is relatively the same. However, MoDOT has utilized fewer FTEs for wage employees (71 from 184) and less FTEs for overtime (46 from 66) compared to one year ago.



** For FY 2008, the "Salaried Employees" data has had the FTE used to date for salaried employees converted to an annual number (by multiplying by four) for ease in comparison to previous years. This could not be reasonably accomplished for wage employees or for overtime.*

Best Value for Every Dollar Spent

Percent of work capacity based on average hours worked

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

Purpose of the Measure:

The purpose of this measure is to track how many hours the average employee works on an annual basis. It can assist management in determining staffing and productivity levels.

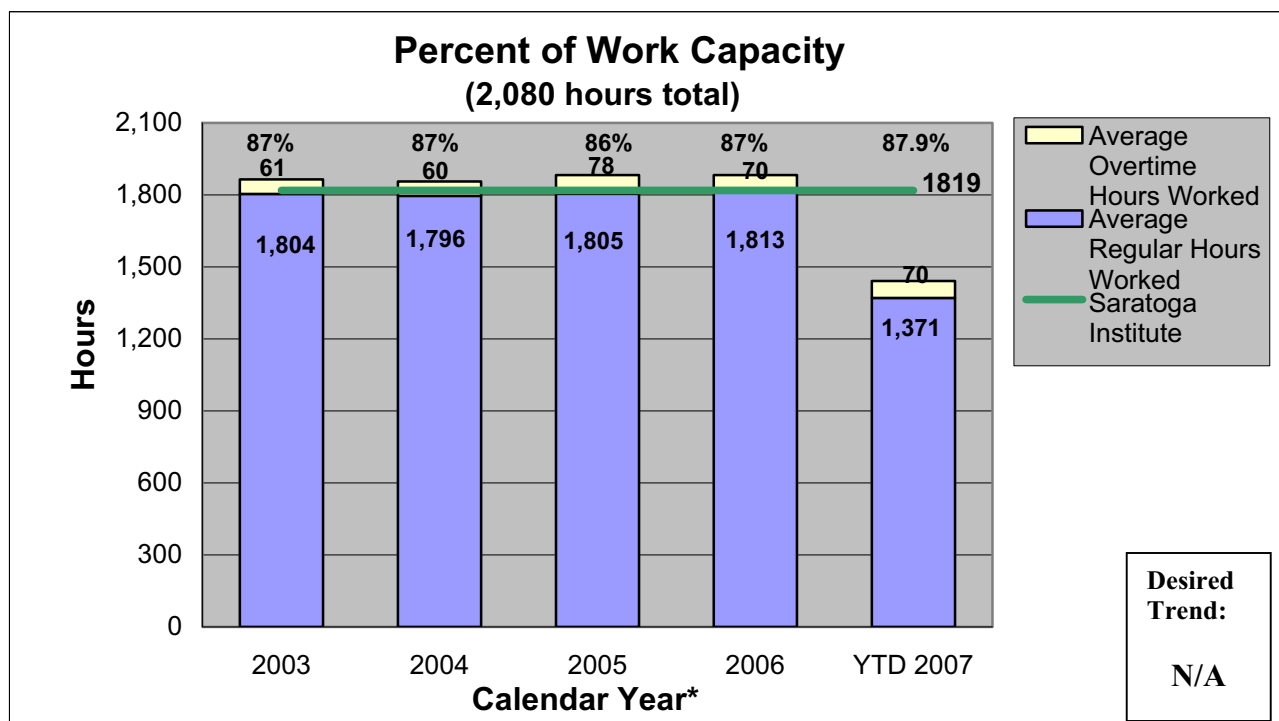
Measurement and Data Collection:

MoDOT measures organizational work capacity based on average regular hours worked and average overtime hours worked by employees. This measure also displays the percentage of regular hours available that are worked.

The average regular hours worked does not include seasonal or wage employees. The average overtime hours worked does not include exempt, seasonal, or wage employees. Benchmark data is from Saratoga Institute report, "Key Trends in Human Capital – Global Perspective," indicating average hours worked per person in the United States.

Improvement Status:

In the July 2007 Tracker, MoDOT reported a year-to-date work capacity of 88.6 percent. Although work capacity has fallen to 87.9 percent, this is typical considering the number of employees who take vacation during the third quarter of the calendar year. The department has increased year-to-date work capacity slightly over 2006 when it was 87.3 percent. However, this slight increase (7 hours per employee) reflects the equivalent of 21 additional FTEs. The increase in work capacity is directly linked to the reduction in employees' use of sick leave. For calendar year 2007 to date, MoDOT employees have used 51,767 fewer hours than in 2006, and over 71,000 fewer hours than the same time period in 2005. In addition, during the most recent quarter, MoDOT staff reduced the average hours of overtime to 15 hours compared to 21 hours during the same quarter in FY 2007.



* Percentage does not include overtime hours.

Best Value for Every Dollar Spent

Rate of employee turnover

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

Purpose of the Measure:

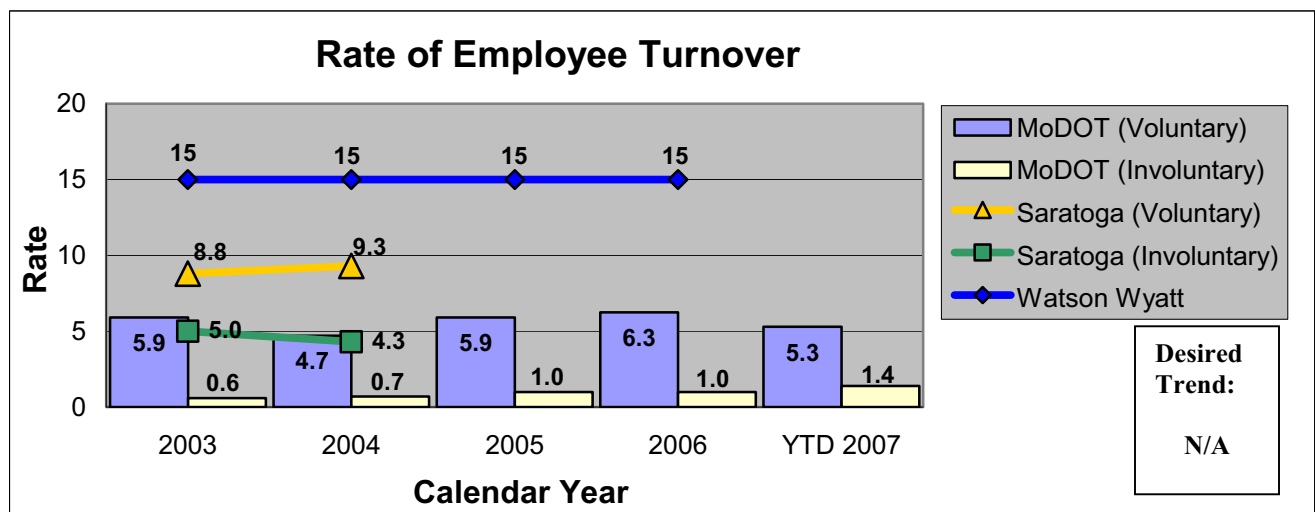
This measure tracks the percentage of employees who leave MoDOT annually and compares the department's turnover rate to benchmarked data. Voluntary turnover includes most resignations and retirements. Involuntary turnover includes dismissals. Beginning with calendar year 2007, it also includes retirements and voluntary resignations of employees who were rated as needs improvement or had a disciplinary history. Turnover rates include voluntary separations, involuntary separations, and deceased employees.

Measurement and Data Collection:

The data is collected statewide to assess employee overall turnover. Comparison data is collected from various sources annually. For benchmarked data, Saratoga Institute surveyed 288 organizations representing a wide variety of industries. In addition, the Watson Wyatt study determined the optimum turnover rate by analyzing turnover rate compared to organizational financial performance.

Improvement Status:

Through September 2007, there were 421 separations compared to 389 during the same period in 2006. Of the 360 voluntary separations, 50 percent were due to retirements, which is slightly higher than one year ago. The 179 resignations to date in 2007 are down nearly 6 percent from 190 at this time last year. There were 22 employees dismissed during the most recent quarter and 10 employees with conduct or performance issues resigned. MoDOT continues to see a reduction in turnover rate of employees in civil engineering positions compared to the same time period in the previous year. At this time last year, 67 employees in civil engineering positions had separated from the department; in 2007, only 45 employees in these positions have left employment. Turnover of professionals in the information technology area have again become a source of concern. During the most recent quarter, 6 information technology professionals left employment with MoDOT, bringing the total for the year to 15. This compares to only six for all of 2006.



Best Value for Every Dollar Spent

Level of job satisfaction

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Micki Knudsen, Human Resources Director

Purpose of the Measure:

This measure tracks the level of employee satisfaction throughout the department at specific points in time. The first chart indicates the level of department employees' job satisfaction and changes in their satisfaction over time. The second chart shows the percentage of MoDOT employees who are satisfied compared to the organization that scored the best in employee satisfaction using the same survey instrument.

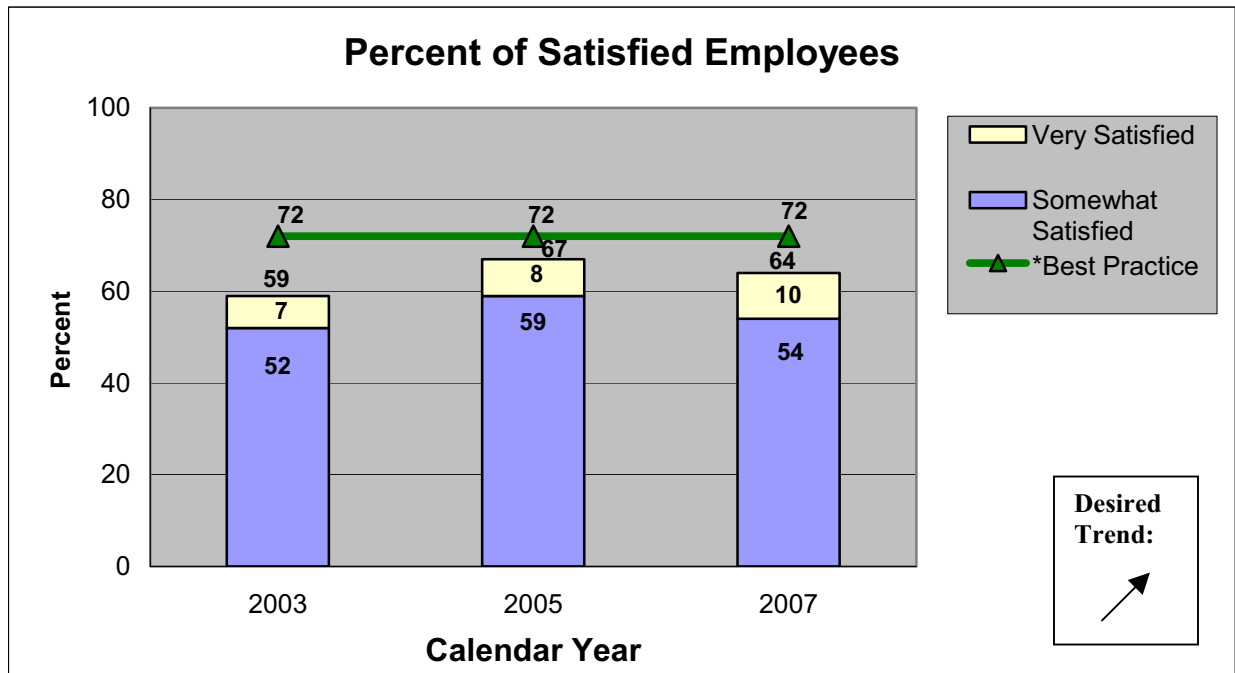
Measurement and Data Collection:

Employee satisfaction is measured using 18 items from a biennial employee survey. Best practice data for an anonymous company was provided by the vendor contracted to conduct the employee survey in 2003 and 2005.

Improvement Status:

During this quarter, a draft report of the results of MoDOT's employee satisfaction survey was completed and will be released in November. This year's report includes an action plan for addressing employee concerns. The employees' written comments were shared with the district engineer at each location in order to develop action items to address employee concerns specific to each location. This year, a larger number of employees rated their satisfaction at the highest level. However, only 64 percent of employees rated their job satisfaction above neutral, compared to 67 percent in 2005. The average scores on 16 of the 18 individual components, which make up job satisfaction, increased over the scores in 2005. Scores decreased on the ratings related to knowledge of the grievance process and fair application of discipline. Although there was significant improvement in scores on questions related to rewards, employee comments indicated their biggest concern centers on pay issues. Those pay issues include: (1) lack of within grade increases, (2) lack of differences in pay between poor performers and high performers, (3) lack of promotion opportunities for non-graduates in engineering and others in non-engineering professions, and (4) new employees making as much as more experienced employees.





** Best practice data for an anonymous company was provided by the vendor contracted to conduct the employee survey in 2003 and 2005.*

Best Value for Every Dollar Spent

Number of lost workdays per year

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

Purpose of the Measure:

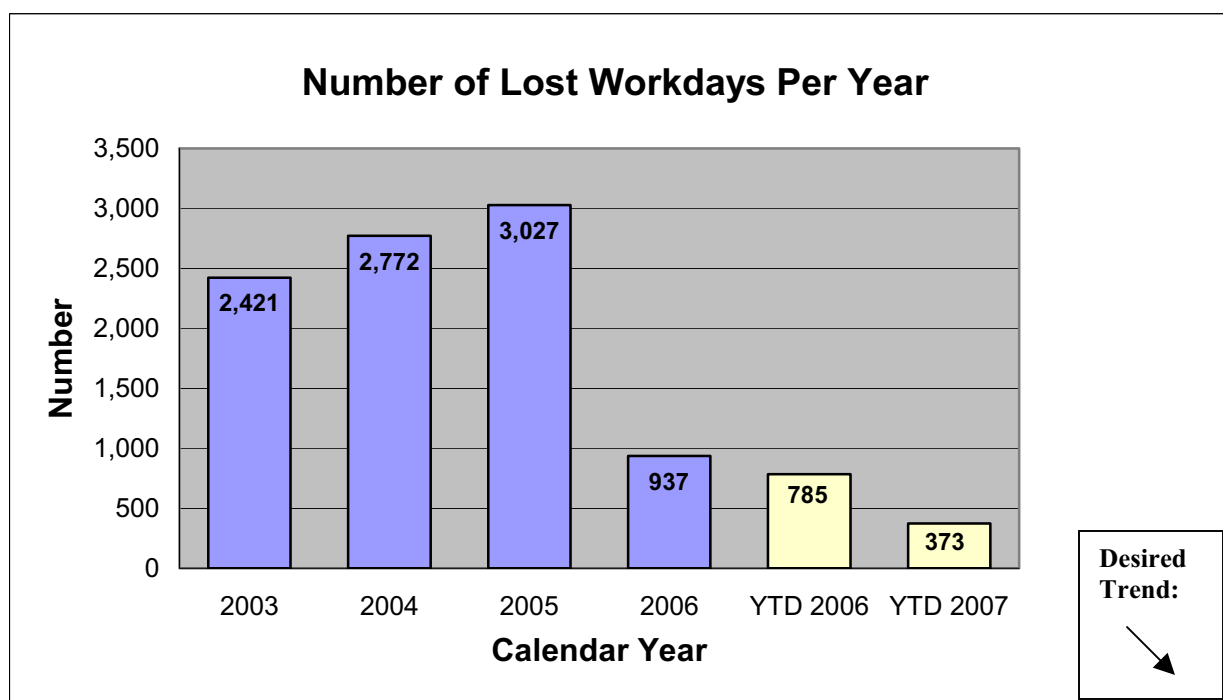
This measure tracks the actual number of days that employees cannot work due to work-related injuries sustained during the reporting period. Note that the results do not include lost workdays for injuries that occurred during previous reporting periods. (Example: an employee that is injured on Dec. 31, 2006 and is off during January of 2007 will not show up as lost time in 2007 because the incident occurred during the previous reporting period.)

Measurement and Data Collection:

The data is collected from Riskmaster, the risk management software, and reported quarterly.

Improvement Status:

The number of lost workdays for the first three quarters of 2007 is 52 percent lower than last year's total, declining from 785 in 2006 to 373 lost workdays in 2007. Though not illustrated in the chart, the number of lost-time incidents decreased by 34 percent for the same period. MoDOT continues to develop and implement new safety-related initiatives to further reduce lost workdays including the Performance Plus Injury Reduction Incentive, a work simulation physical exam and a fitness for duty program. Risk Management personnel now direct all medical care for work-related injuries. MoDOT continues to identify and provide light-duty assignments for injured workers with restrictions in an effort to get them back to work quickly.



Best Value for Every Dollar Spent

Rate and total of OSHA recordable incidents

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

Purpose of the Measure:

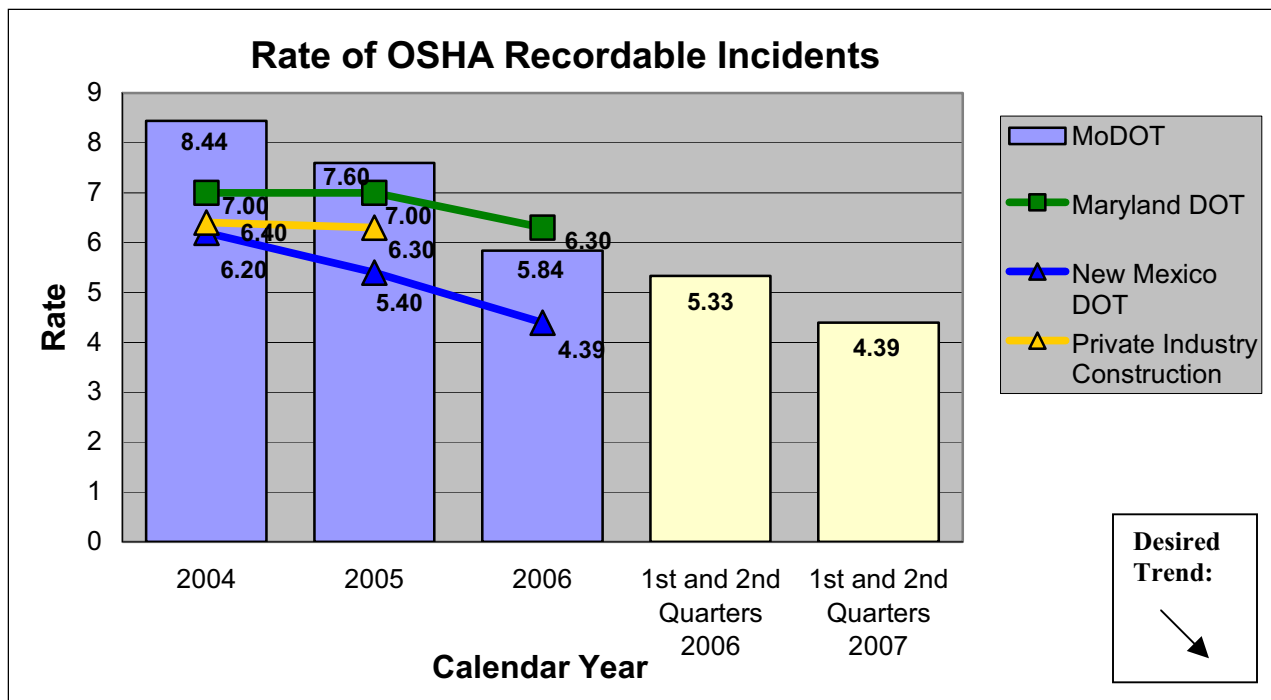
This measure tracks the number of recordable injuries, as defined by OSHA, in total and as a rate of injuries per 100 workers. The calculation for incidence rate is the number of recordables times 200,000 divided by the number of hours worked. The 200,000 used in the calculation is the base for 100 full-time workers (working 40 hours per week, 50 weeks per year). OSHA defines a recordable incident as a work-related injury or illness that results in death, days away from work, restricted work or transfer to another job, medical treatment beyond first aid, or loss of consciousness. MoDOT defines medical treatment beyond first aid as work-related injuries requiring two or more doctor visits.

Measurement and Data Collection:

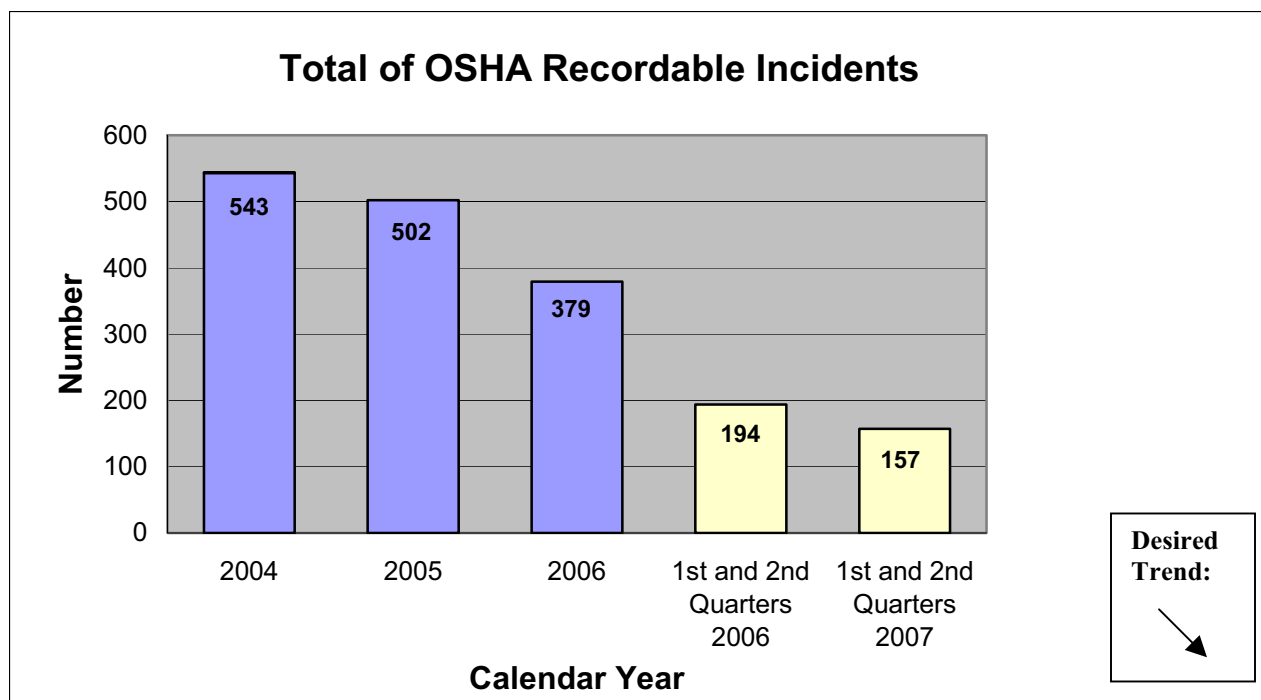
MoDOT reports on the measure quarterly, one quarter in arrears, and collects the injury data from Riskmaster, a claims administration software. The number of hours worked is taken from MoDOT's payroll data.

Improvement Status:

The number of OSHA recordables and the incidence rate has declined over the reporting periods noted. The incident rate has declined by 18 percent for the first and second quarters of 2007 over the same time period in 2006, dropping from 5.33 to 4.39. The number of recordables has declined by 19 percent over the same period, demonstrating a reduction from 194 to 157 OSHA recordables. The department has reduced its injury rate by successfully implementing numerous safety-related initiatives.



(Information from Private Industry Construction was not available for 2006.)



Best Value for Every Dollar Spent

Number of claims and total claims expense for general liability

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Jeff Padgett, Acting Risk Management Director

Purpose of the Measure:

General liability claims arise from allegations of injuries/damages caused by the dangerous condition of MoDOT property and the injury/damage directly resulting from the dangerous condition. In addition, an employee must be negligent and create the dangerous condition or MoDOT must have actual or constructive notice of the dangerous condition in sufficient time prior to the injury/damage to have taken measures to protect the public against the dangerous condition. This measure tracks the number of general liability claims filed and claims expense incurred during the reporting period. The claims expense includes cash paid and adjustments to claim reserves.

Measurement and Data Collection:

MoDOT reports on the measure quarterly and collects the claims data from Riskmaster, a claims administration software. The claims expense is collected from the self-insurance plan financial statements.

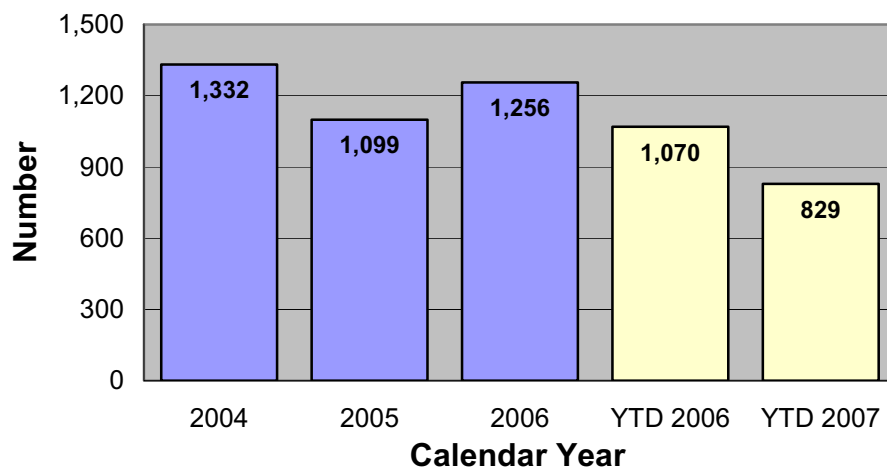
Improvement Status:

The number of claims for general liability and the total claims expense for general liability have declined over the reporting periods noted. The number of claims has declined by 23 percent through 2007 over the same time period in 2006, dropping from 1,070 to 829. The total claims expense also declined through 2007, from \$4.7 million to \$90,000, or 98 percent.

The decrease in number of claims filed between 2004 and 2005 is largely attributable to a substantial reduction in pothole claims in the urban areas as SRI began. The number of claims filed in 2006 increased over 2005 because of a chip seal job in the Springfield area, which resulted in over 400 claims. The number of claims has decreased year to date, partly due to better results with chip seal projects.

The claims expenses increased substantially in 2005 as MoDOT received approximately 70 additional lawsuits immediately prior to the effective date of tort reform legislation. The expense represents the best estimate of the future liability attached to each claim and has been and will continue to be adjusted over the life of the claims. Our actual claims expenses have decreased significantly due to settlement of cases below their reserves and the dismissals of lawsuits.

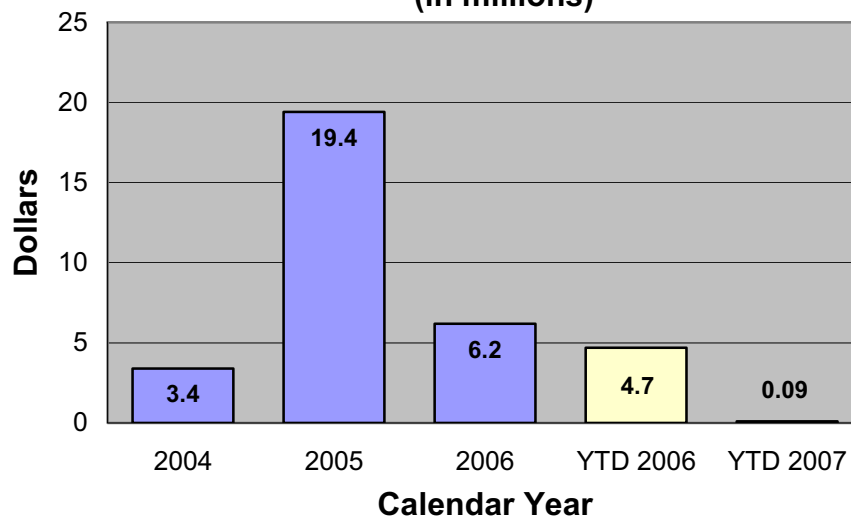
Number of Claims for General Liability



Desired
Trend:



Total Claims Expense for General Liability (in millions)



Desired
Trend:



Best Value for Every Dollar Spent

Unit cost per square foot of buildings

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Chris DeVore, General Services Manager - Facilities

Purpose of the Measure:

This measure tracks the cost of operating department buildings, building capital improvements and capital asset preservation projects.

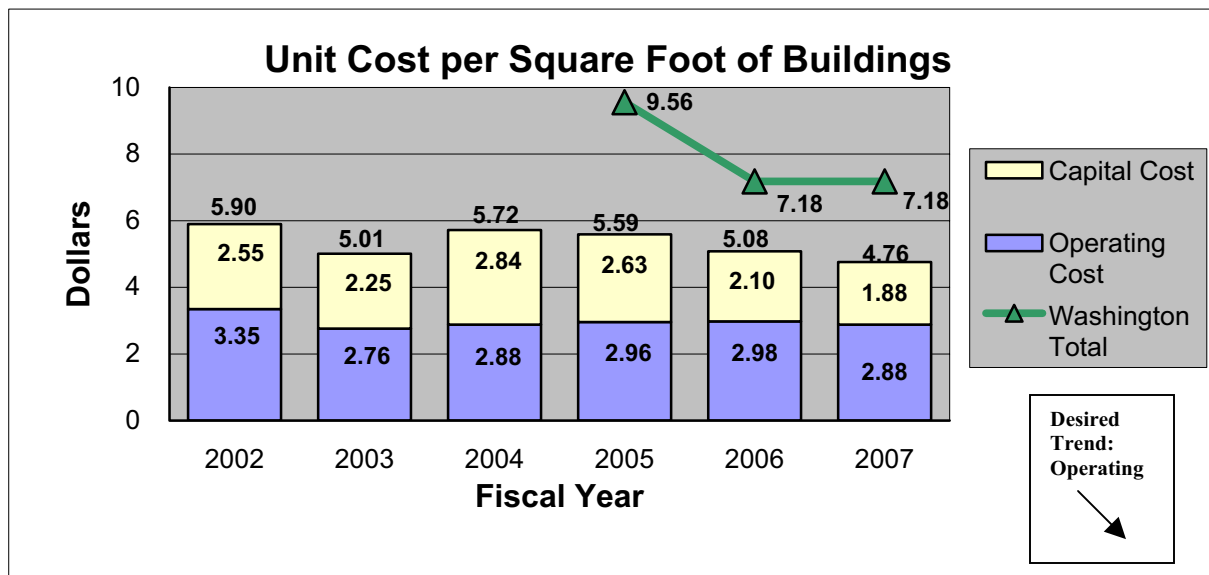
Measurement and Data Collection:

The data is collected based on expenditures recorded in the statewide financial accounting system. The following expenditures are included in the analysis: the cost of labor, benefits, and materials for central office facilities management and facilities maintenance. It does not include the employer's share of Social Security/Medicare taxes and the department's match for deferred compensation. Operating expenditures, including repair supplies, custodial supplies, janitorial and other services, maintenance and repair services, building and storage leases, and utilities have been included. Capital expenditures include new construction and asset preservation projects. This is an annual measure updated each July.

Improvement Status:

Between 2006 and 2007, capital costs (actual expenditures) as shown indicate a decrease of approximately 11 percent, however a transfer of funds from the CIP to the STIP for the state match of federal enhancement funds does not show up as an expenditure at this time. Operating cost per square foot has decreased by 3 percent. This overall decrease is the result of a decrease in routine maintenance and repairs of 2.5 percent, a decrease in lease cost of 0.46 percent, a decrease in Central Office administrative costs of 2.6 percent and a reduction in utility cost of 4.7 percent. The net result is a \$524,465 reduction in cost. This reduction in operating cost is attributable to placing more emphasis on preserving MoDOT's capital assets, thus reducing routine maintenance cost and targeting needs that reduce energy consumption.

The benchmark is from the Washington DOT. Based on its budget the approximate capital expenditures for 2006-2007 were \$0.46 per square foot and the approximate operating expenditures were \$6.72 per square foot.



Best Value for Every Dollar Spent

Fleet expenses

Result Driver: Roberta Broecker, Chief Financial Officer

Measurement Driver: Jeannie Wilson, Central Office General Services Manager

Purpose of the Measure:

This measure tracks costs for MoDOT's fleet, as well as its condition. The first chart compares repair cost and acquisition expenditures. The second chart provides an overall fleet condition status based on actual fleet age and meter compared to maximum life-cycle thresholds.

Measurement and Data Collection:

The expenditures are collected from the statewide financial accounting system. All costs associated with repairs, supplies and maintenance for all fleet items are included in the analysis. The fleet expenses chart is updated annually. New information will be available in July 2008.

Age and meter thresholds were established based on maximum life usefulness. Units are identified as either exceeding their primary life cycle for either its age or meter, reaching maximum primary life in the next three years; and not exceeding the threshold within the next three years.

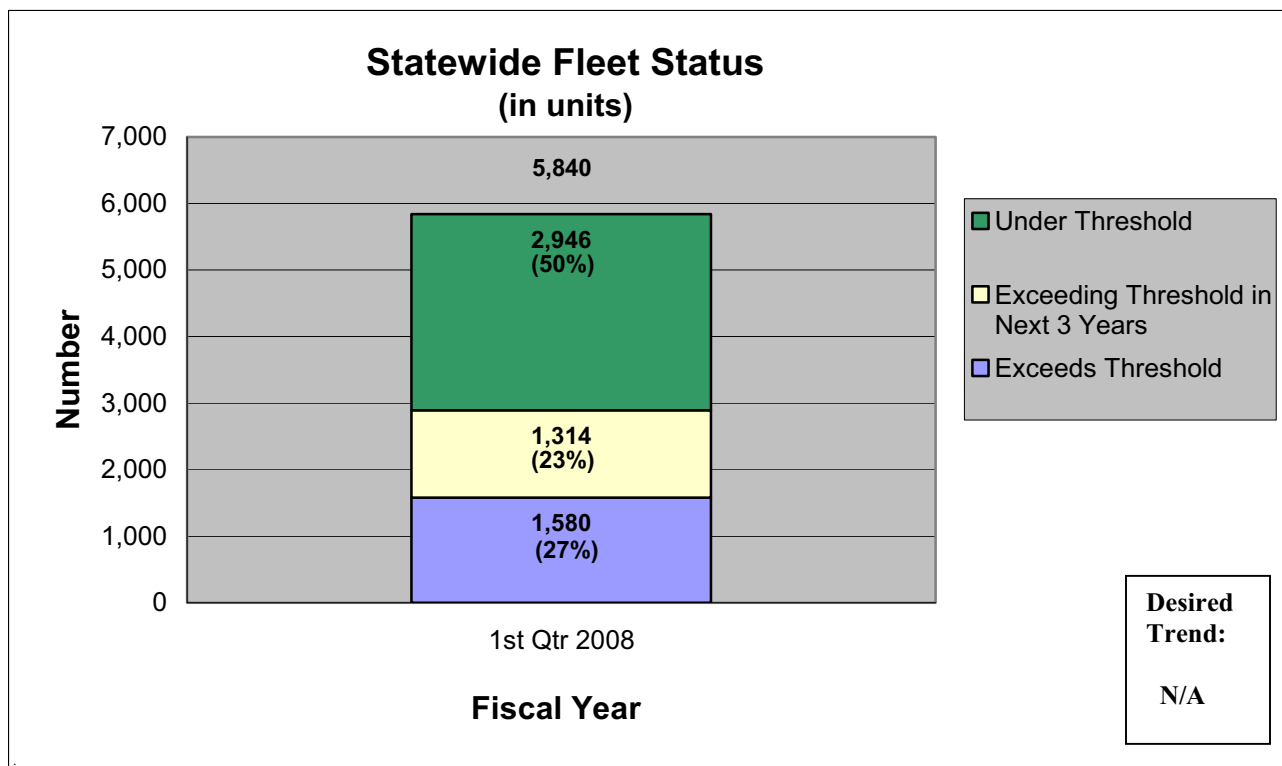
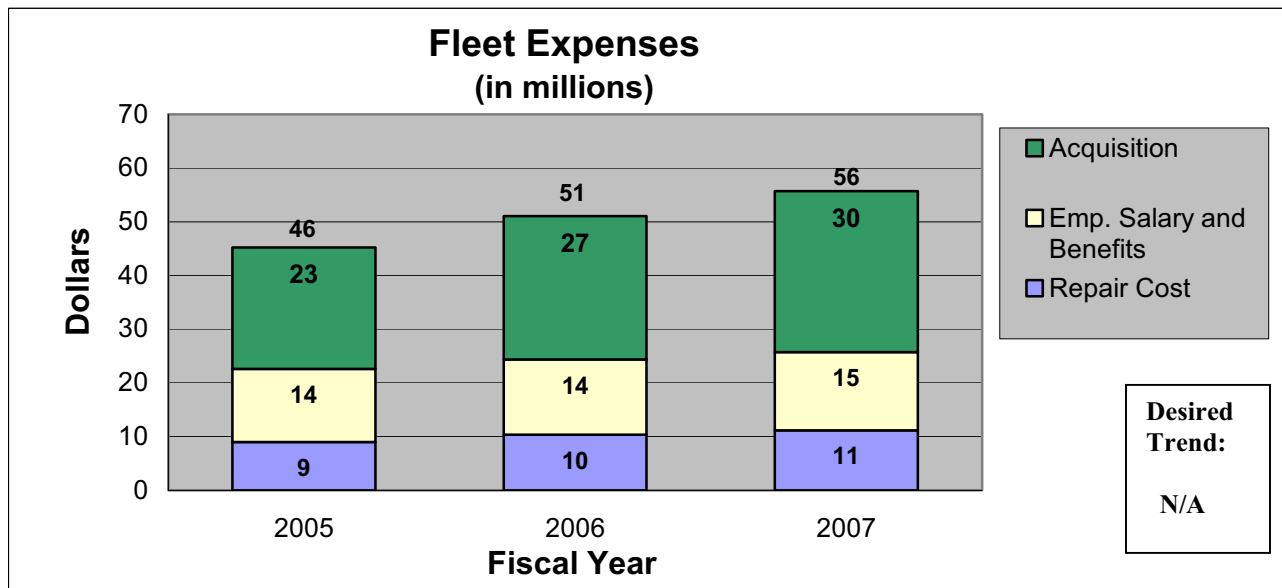
Improvement Status:

The repair costs to MoDOT's fleet increased from \$10 million to \$11 million from fiscal year 2006 to FY 2007, while salary and benefit costs for fleet employees increased from \$14 million to \$15 million in FY 2007. Acquisition costs increased from \$27 million to \$30 million from FY 2006 to FY 2007. Severe winter storms and the rising cost of steel are major factors in the increases. Beginning with the first quarter of 2008, the criteria for the statewide fleet status has been modified to provide a more accurate accounting of MoDOT's fleet status. The criteria includes all active units in lieu of the previous criteria that required all fleet units to be active for a minimum of 12 months.

Fifty percent of the MoDOT fleet is either beyond the established replacement criteria or will reach the criteria within the next three years. Fifty percent of the MoDOT fleet is under the replacement threshold.

MoDOT is reviewing all "dedicated" (single use) equipment to identify potential units that could be eliminated by acquiring equipment that performs more than one function. For example, a nurse truck has been designed that will be used for striping operations, spraying herbicides, and plowing snow.

A statewide equipment inspection policy has been implemented to ensure all fleet units are assessed on an annual basis. The inspection process has identified potential cost saving opportunities, allowing equipment technicians to become more proactive in maintaining the fleet before major breakdowns occur.



Best Value for Every Dollar Spent

Percent of vendor invoices paid on time

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Debbie Rickard, Controller

Purpose of the Measure:

This measure tracks the department's timeliness in processing vendor payments.

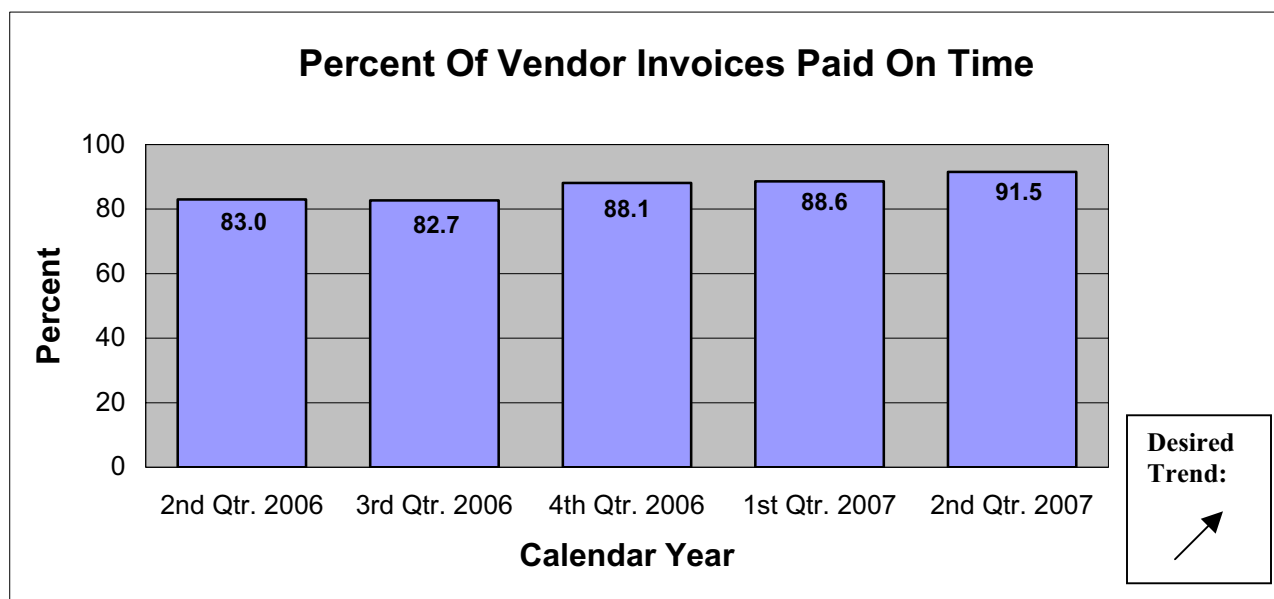
Measurement and Data Collection:

The check date determines if invoice payment is timely. Timely is defined as a check issued less than 31 days from the date of the invoice.

Improvement Status:

Vendors age their receivables based on the date of invoice. This measure indicates there has been consistent improvement, but there are still opportunities to ensure vendors consider the department a good customer. The steps to further improve are: (1) identify specific vendors experiencing delayed payment and work with those vendors to obtain timely, accurate invoices, (2) determine if delayed payments are common to a particular division within the Central Office or a district, (3) identify processes contributing to the delayed payment, and (4) identify innovative solutions to receive invoices from the customer.

Analysis tools have been developed to assist in identifying areas where improvements can be made.



Best Value for Every Dollar Spent

Distribution of expenditures

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Debbie Rickard, Controller

Purpose of the Measure:

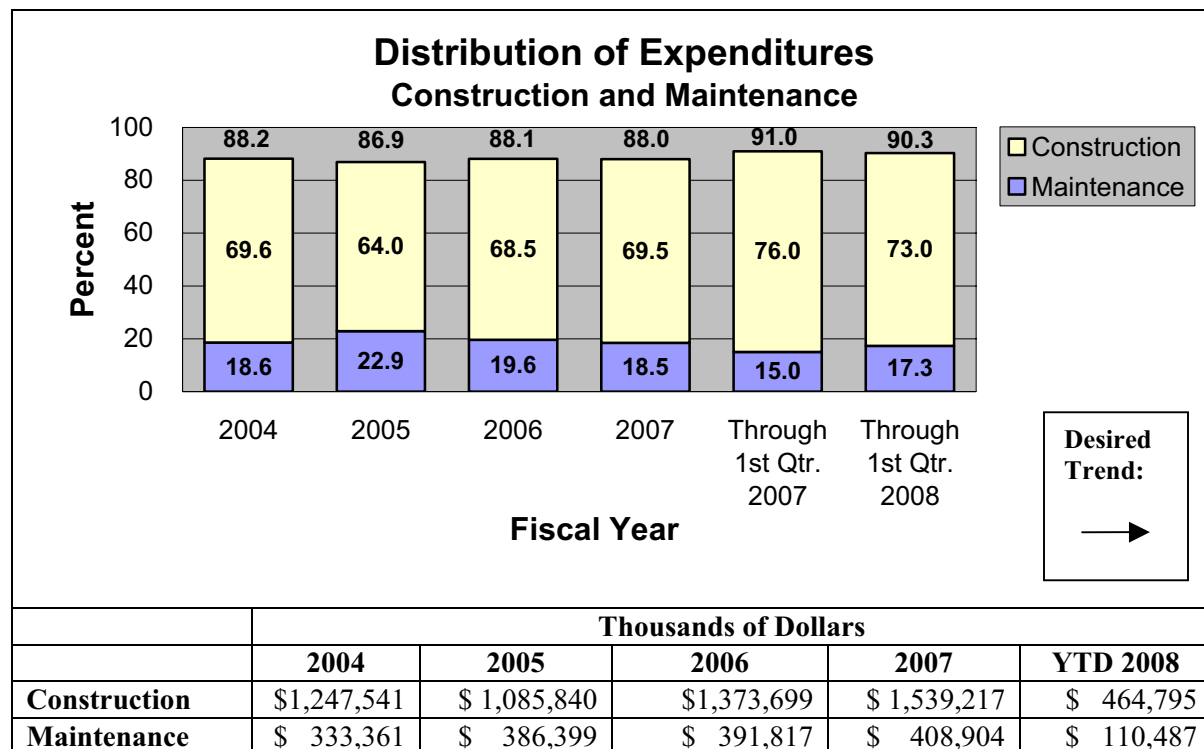
The purpose of the measure is to demonstrate a responsible use of taxpayers' money, with the emphasis of spending on the construction and maintenance of our transportation system.

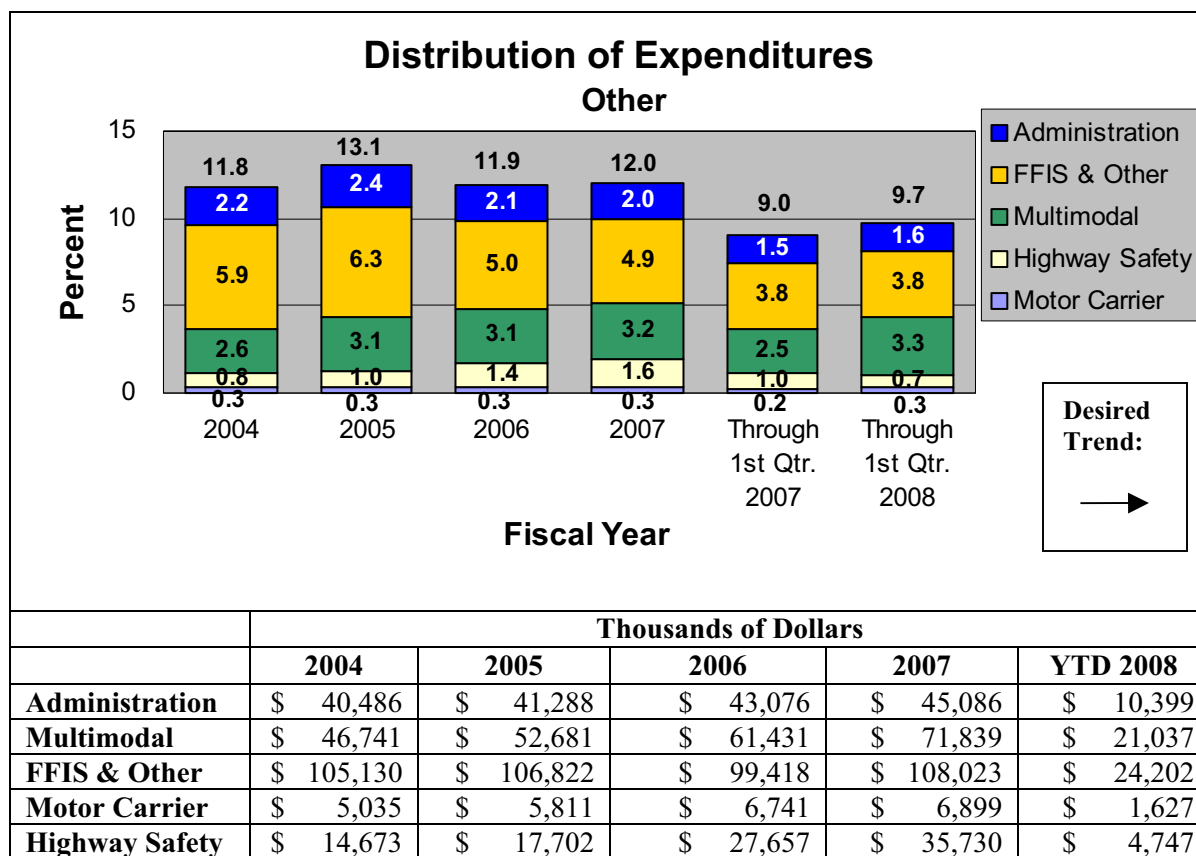
Measurement and Data Collection:

The data collection is based on cash expenditures by appropriation on a quarterly basis. Construction and maintenance expenditures are defined as expenditures from the construction and maintenance appropriations. Other expenditures include: administration, multimodal, fleet, facilities, information systems, and other services (FFIS & Other) appropriations.

Improvement Status:

The department's emphasis is on expenditures for routine maintenance of the system (maintenance appropriation) and rehabilitation and construction of the system (construction appropriation). Construction expenditures have decreased from the same period for Fiscal Year 2007, percentage and dollars, as a result of reduced bond proceeds and a reduced construction program. Expenditures from administration, FFIS, and Motor Carriers as a percent of total expenditures remain constant, which is consistent with the desired trend. Highway Safety and Multimodal fluctuate depending on availability of federal grants.





Best Value for Every Dollar Spent

Percent variance of state revenue projections

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Ben Reeser, Finance Manager

Purpose of the Measure:

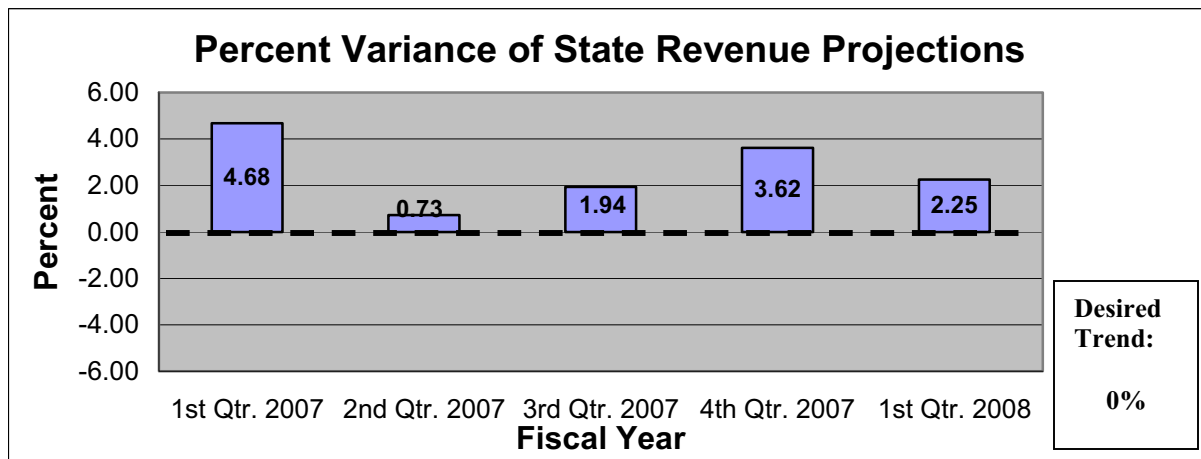
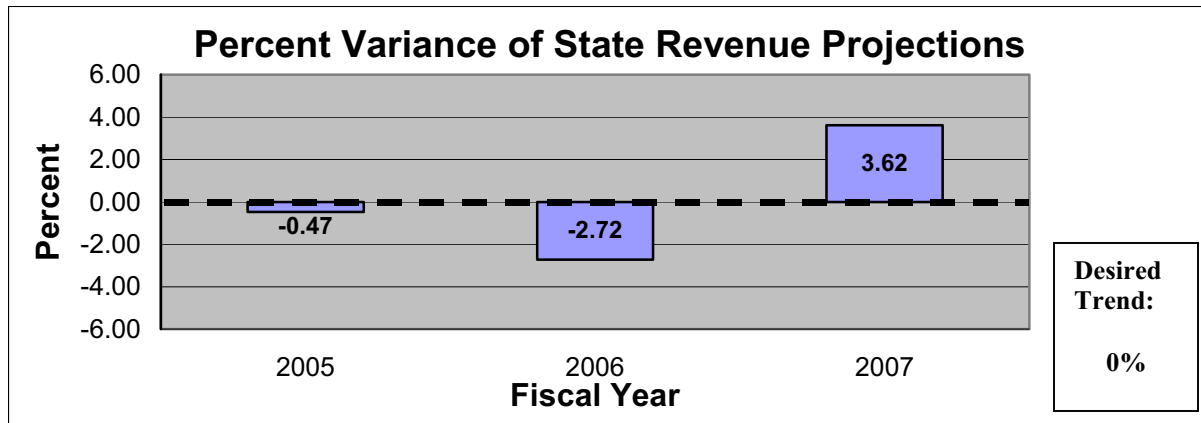
The measure shows the precision of state revenue projections. Projections are used to adjust the budget that funds MoDOT's operations and capital program.

Measurement and Data Collection:

State revenue includes three major components of taxes and fees paid by highway users: motor fuel taxes, motor vehicle and driver licensing fees, and motor vehicle sales and use taxes. This measure does not include interest earnings and miscellaneous revenue, which are also considered state revenues. The measure provides the cumulative, year-to-date percent variance of actual state revenue versus projected state revenue. Projections are based on the current financial forecast. The forecast is updated at the beginning of each fiscal year. This measure is updated quarterly.

Improvement Status:

The actual state revenue was greater than projected through the first quarter of fiscal year 2008. The projected revenue was \$261.9 million. However, the actual receipts were \$267.8 million, a difference of \$5.9 million and a positive variance of 2.25 percent. The desired trend is for the actual revenue to match projections with no variance. MoDOT staff adjusts future operating and capital budgets to account for these variances.



Best Value for Every Dollar Spent

MoDOT national ranking in revenue per mile

Result Driver: Roberta Broeker, Chief Financial Officer

Measurement Driver: Ben Reeser, Finance Manager

Purpose of the Measure:

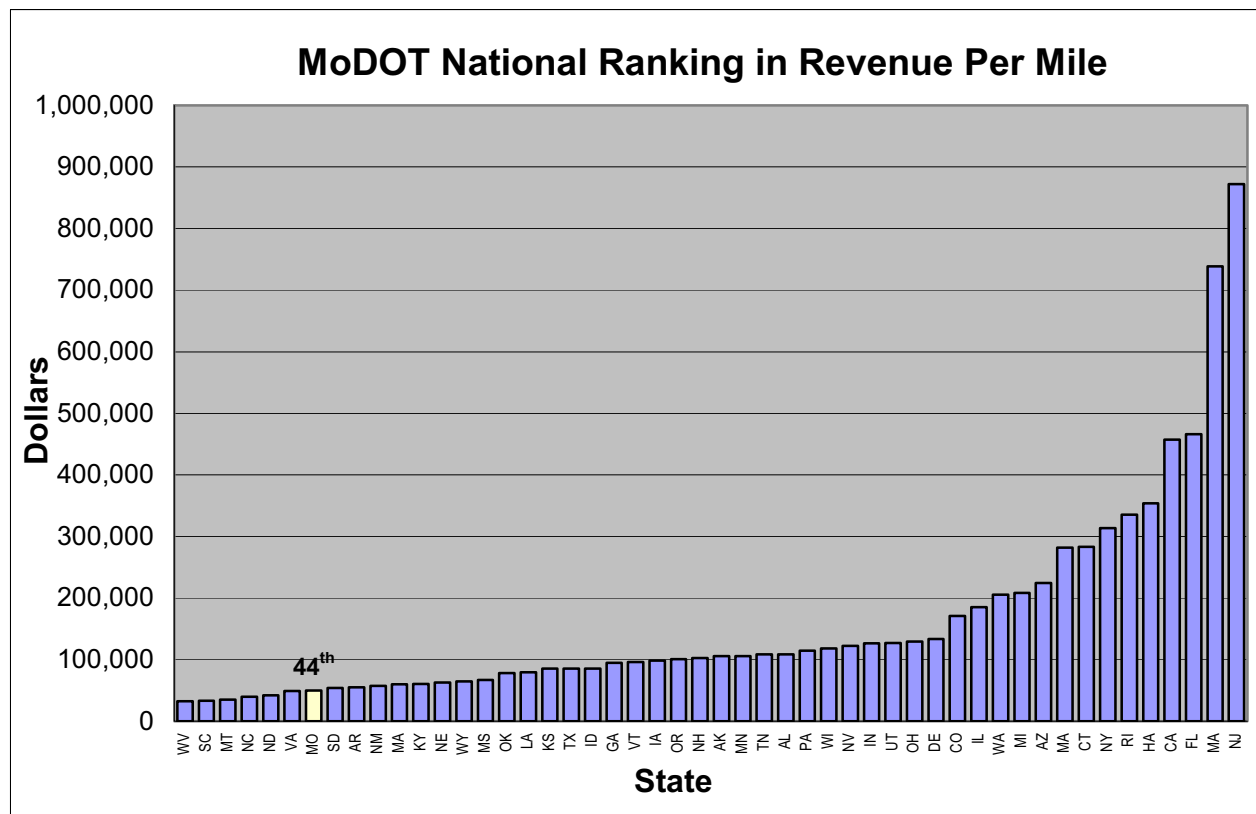
This measure shows Missouri's national ranking in the amount of revenue per mile that is available to spend on the state highway system.

Measurement and Data Collection:

Revenue is the total receipts less bonds as reported in the Federal Highway Administration's annual highway statistics report entitled "Revenues Used By States For State-Administered Highways." The mileage is the state highway agency miles as reported in the Federal Highway Administration's annual highway statistics report entitled "Public Road Length – Miles By Ownership." Resource Management collects this information from the Federal Highway Administration. This annual measure is updated each January.

Improvement Status:

Missouri's revenue per mile of \$50,099 currently ranks 44th in the nation. Missouri has a very large state highway system, consisting of 32,464 miles, which is the seventh largest system in the nation. New Jersey's revenue per mile of \$872,389 ranks first. However, its state highway system contains only 2,321 miles. MoDOT staff continues to communicate the need for additional transportation funding to the public. Missouri's transportation needs greatly exceed current available funding.



APPENDIX 4



CONTINUING THE JOURNEY

VDOT Improvements Since 2002

VDOT is on a journey of innovation and improvement to become a 21st century transportation mobility agency. For VDOT, this journey began in 2002 with our efforts to improve our business and deliver a world-class transportation program on time and on budget. The accomplishments outlined in this publication chronicle the steps that have led us so far on this journey.



The Pocahontas Parkway was VDOT's first PPTA project. VDOT signed its first-ever, and the nation's third, concession agreement in 2006, transferring operations and maintenance responsibility to Transurban.

- Completed the first phase of the Virginia Capital Trail, Virginia's first stand-alone bike and walking trail project
- Expanded Route 17 to four lanes through the environmentally sensitive Great Dismal Swamp. VDOT was nationally recognized for our environmental efforts on this project.
 - Recognized nationally by the Federal Highway Administration (FHWA) for protecting wildlife and preserving the ecosystem
 - Designated as an Exemplary Ecosystem Initiative
- Became one of the first state DOTs to establish a System Operations program that focuses on maximizing capacity of the existing highway network, increasing safety and using technology to address congestion along major travel corridors
- Implemented 511 to provide a one-stop shop for motorists to get the latest real-time traffic and travel information. This service is available by calling 511 from any phone in Virginia or logging onto www.511Virginia.org
- Outsourcing interstate maintenance by July 1, 2009, as directed by the Code of Virginia
 - 157 miles of interstate already outsourced
 - 668 miles scheduled to be advertised in FY07
 - 398 miles scheduled to be advertised in FY08
- Implementing the Governor's initiative to align land use and transportation planning activities legislation through requiring localities to work with VDOT in considering the traffic impact of development projects (Chapter 527 regulations)
- Pursuing a strategy offering to transfer maintenance and construction responsibilities to localities that wish to assume local control over transportation programs. These efforts include:
 - Executed an agreement that provides for the transfer of the Dulles Toll Road to the Metropolitan Washington Airports Authority after certain conditions are met
 - Transferred Suffolk secondary road maintenance to the city of Suffolk
 - Transferred Route 164 rail relocation project from Department of Rail and Public Transportation to Virginia Port Authority
 - Implemented transfer of construction responsibilities to eight localities in the First Cities initiative, representing 35 percent of state urban construction:
 - Harrisonburg, Bridgewater, Charlottesville, Hampton, Richmond, and Virginia Beach completed
 - Newport News and Lynchburg are under way
- Established three Highway Safety Corridors on areas of interstate with high accident rates
- Developed a new vision for I-81 that incorporates short-term safety improvements and rail upgrades, and identifies long-term highway needs



The Dashboard is VDOT's nationally recognized project management tool to let the public and VDOT leadership monitor the status of key metrics.

ORGANIZATIONAL EFFICIENCY AND EFFECTIVENESS IMPROVEMENTS

- Promoted accountability and improved transparency through the Dashboard, which enables the public to review VDOT's performance in critical service areas: construction, maintenance, finance, operations, safety, engineering and the environment
- Established on-time and on-budget performance goals for VDOT and realized significant improvement in the agency's program delivery:

MEASURE	2002	FY2007 YTD
Construction On-Time	20%	90%
Construction On-Budget	51%	90%
Maintenance On-Time	38%	79%
Maintenance On-Budget	59%	89%
Construction Quality (CQIP)	89.8%	90.9%

- Developed a Quarterly Report to convey our progress to the public and our stakeholders
- Improved data integrity for project management and cash management by establishing policies and procedures and assigned accountability
- Implemented an Asset Management System that tracks asset conditions
- Established pavement and bridge performance targets:

MEASURE	FY06 Results	FY07-08 Targets
% of Interstate Pavements Rated Deficient	17.1%	No more than 18%
% of Primary Pavements Rated Deficient	15.8%	No more than 18%
% of Bridges rated as Needing Repair/Rehabilitation	38.6%	No more than 40%

- Eliminated \$867 million of project deficits
- Improved internal financial controls — implementing recommendations contained in the Auditor of Public Accounts' (APA) Special Review of Cash Management and Capital Budgeting Practices. In its 2002 audit, APA listed 50 findings. To date, all 50 have been addressed and 21 have been resolved. A 2006 audit by the Auditor of Public Accounts found no reportable findings for VDOT.
- Guaranteed project budgets — ensured that the total funds allocated to any highway construction project are equal to total expenditures within 12 months following completion of the project (per Section 33.1-12 of the Code of Virginia)



VDOT has completed the first span of the Woodrow Wilson Bridge on time and on budget. The demolition of the old bridge in August 2006 was an explosive milestone marking progress in this \$2.4 billion multi-state project, one of the largest in the nation.

- VDOT construction projects in excess of \$100 million have approved financial plans to ensure that necessary revenues will be available when the project is ready to proceed.
- Developed a Project Cost Estimation System to ensure reliable, consistent cost estimates on all projects
- Implemented an updated revenue estimating system based on the official state forecast by the Virginia Department of Taxation

WORKFORCE TRANSFORMATIONS

- Reduced number of employees from 10,192 in 2002 to approximately 8,800 today, the lowest level since 1965
 - The two state DOTs with larger highway systems, Texas and North Carolina, have 15,000 and 14,700 employees respectively.
 - Simultaneously, we are doing more with less, managing nearly 58,000 miles of highway today vs. 49,800 in 1965
- Streamlined VDOT's management structure to ensure that decision-making authority is assigned to the appropriate area.
 - Transferring appropriate decision-making authority and accountability from headquarters to the field
 - Established Innovative Project Delivery and Innovative Project Finance business units to focus exclusively on developing the full potential of the Public-Private Transportation Act and finding new ways the private sector can help fund and deliver projects
- Consolidated maintenance facility operations from 335 locations to 248 to improve efficiency
 - Implemented a plan to reduce administrative overhead by eliminating 33 supervisory teams and corresponding administrative staff as part of our maintenance facility consolidation
 - Increased span of control for area superintendents to an average of 1:15 from as low as 1:8 in some areas
- Continued working to professionalize the workforce. For example, VDOT increased the number of positions required to be registered professional engineers from 4 to 271.
- Established a Knowledge Management program to capture and preserve knowledge of the most experienced employees
- Established an Executive Leadership program to develop VDOT rising stars into the agency's future leaders

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APPENDIX 5

OREGON DEPARTMENT OF TRANSPORTATION

III. KEY MEASURE ANALYSIS

Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

KPM #21	TIMELINESS OF PROJECTS GOING TO CONSTRUCTION PHASE Percent of projects going to construction phase within 90 days of target date.		Measure since: 2006
Goal	(ODOT G4) Customer Service – Provide excellent customer service; (ODOT G2) Moves People and Goods Efficiently. Provide a transportation system that moves people and goods efficiently		
Oregon Context	(G2 O2) Travel and Shipping Delays – Reduce hours of travel and shipping delays due to congestion, construction, incidents and weather. (ODOT G4 O2) Efficiency – Improve efficiency to better serve customers of Driver and Motor Vehicle Services, Motor Carrier Transportation and other ODOT services;		
Data source	The project’s target bid let date is obtained from the Project Control System (PCS), and the actual Notice to Proceed (NTP) date from the Trns.port LAS module.		
Owner	Highway Finance Office, Highway Division, ODOT, John Turner, 503-986-3176		

1. OUR STRATEGY

The goal is to develop efficient, complete and attainable project development schedules, and then aggressively manage all milestones, ensuring all milestone deliverables are complete and on time. The Agency is currently standardizing the process of project development. The Agency already has in place a 12 month lock-in schedule for projects to get to the bid/let date. Projects which bid let within 90 days of this targeted bid/let date or earlier are considered on time. There are also specifications that occur after bid opening such as: the Bidder must hold to his/her bid for 30 days from bid opening; the Bidder after receiving the contract booklet, has 15 calendar days to return a signed contract along with insurance certificates and bonds; ODOT has 7 calendar days, after receiving signed contract and correct insurance and bonds, to execute the contract; and ODOT has 5 calendar days after executing the contract to issue Notice to Proceed. These specifications add up to a shall not exceed 57 days from bid opening to Notice to Proceed. Currently the average amount of days is 35. Upon contract execution and issuance of Notice to Proceed, the project moves from the procurement phase to the construction phase.

2. ABOUT THE TARGETS

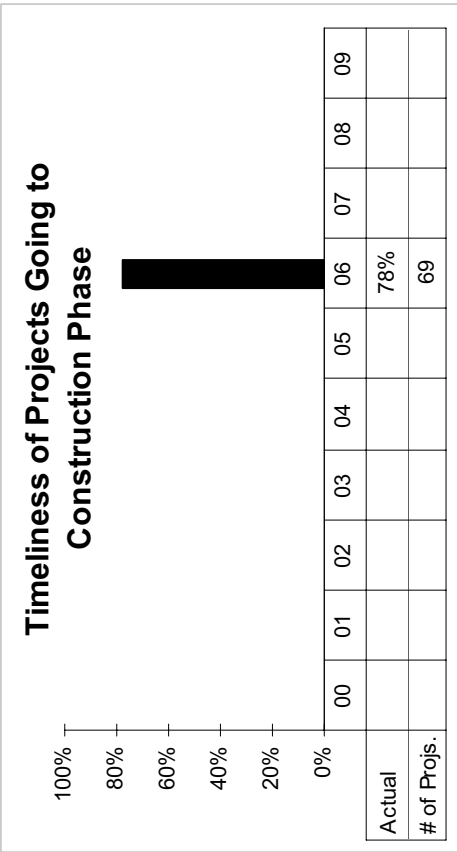
This measure provides a new definition of on time performance. Since this is a new legislative measure, no targets have been established.

3. HOW WE ARE DOING

This measure provides a new definition of on time performance. Since this is a new legislative measure, no trend analysis has been performed.

4. HOW WE COMPARE

Due to differing methodologies and definitions, there is no direct correlation with other state's measures.



Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

5. FACTORS AFFECTING RESULTS

Items which can cause late projects include:

- **During the Project Development Process:** ** Additions made to the scope of work to be performed. * Unanticipated archeological or environmental impacts. * Permit issues.*
- **During the Procurement Process:** ** Balancing bid let dates to improve bid pricing. * Contractor timeliness in returning documents. * Re-bid of rejected proposals*

6. WHAT NEEDS TO BE DONE

A target threshold needs to be set, as well as a plan of response in the advent of the threshold not being reached.

7. ABOUT THE DATA

In the past, the project design phase has been tracked for timeliness. This measure examines the timeliness of both project design and procurement phases.

Design: When a project is provided to contractors to bid on (referred to as bid-let), the project has completed the design phase. The timeliness of the design phase is measured by "locking-in" a baseline date when the project is 12 months from its expected bid-let date. This baseline becomes the target bid-let date. Projects which bid let within 90 days of this targeted bid/let date or earlier are considered on time for design. **Procurement:** When a Notice to Proceed (NTP) is issued for a project, the procurement phase has completed and the construction phase begins. Projects are allowed 57 days to reach NTP after they have been bid-let. **Metric Definition:** Timeliness of both the design and procurement phases are examined in this metric by examining the projects which NTPed in a given year to determine what percentage reached NTP before their target bid-let date + 147 days. (Actual NTP < (target bid let date + 90 window + 57 days for NTP = on time)

Other information about this metric:

- **Reporting cycle:** Oregon fiscal year
- This measure has not been tracked in this form before, thus the prior year's worth of data presented here is an extrapolation of past performance.
- Projects which otherwise would be considered late have the potential of going unreported if they have been split or combined with other projects.
- Projects included in this metric only include the major work types of BRIDGE, PRESERVATION, MODERNIZATION, SAFETY, and OPERATIONS.
- Locally administered projects and projects let through ODOT Central Services are not included.

OREGON DEPARTMENT OF TRANSPORTATION

III. KEY MEASURE ANALYSIS

Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

KPM #22	CONSTRUCTION PROJECT COMPLETION TIMELINESS Percent of projects with the construction phase completed within 90 days of original contract completion date.	Measure since: 2006
Goal	(ODOT G2) Moves People and Goods Efficiently – Provide a transportation system that moves people and goods efficiently (ODOT G4) Customer Service – Provide excellent customer service	
Oregon Context	(G2 O2) Travel and Shipping Delays – Reduce hours of travel and shipping delays due to congestion, construction, incidents and weather; (ODOT G4 O1) Transportation Services – Improve how ODOT delivers transportation services; (ODOT G4 O2) Efficiency – Improve efficiency to better serve customers of Driver and Motor Vehicle Services, Motor Carrier Transportation and other ODOT services; (OBM 68) Traffic Congestion – Hours of travel delay per capita per year in urbanized areas; (OBM 72) Road Condition – Percent of roads and bridges in fair or better condition	
Data source	CPS for contract specified completion date and actual completion date. Data is reported by State Fiscal Year.	
Owner	Highway Finance Office, Highway Division, ODOT, John Turner, 503-986-3176	

1. OUR STRATEGY

Goal is to ensure development of viable and efficient construction schedules which minimize freight and traveler impact and then aggressively manage adherence to the final construction schedule. Project Construction Schedules are developed during development of the project prior to bidding. This information becomes the basis for the project special provisions which contractually define completion, either by specific ending dates, or allowable construction days. All contracts also require the contractor to develop project construction schedules. The Project Manager who oversees the work of the Contractor during construction, monitors adherence to schedules throughout the life of the project. Contracts have financial consequences for failure to be completed on time, via liquidated damages. Some contracts have financial incentives for the contractor to finish early. These are contracts where there is a significant quantifiable cost benefit to the traveling public to minimize road closure time.

2. ABOUT THE TARGETS

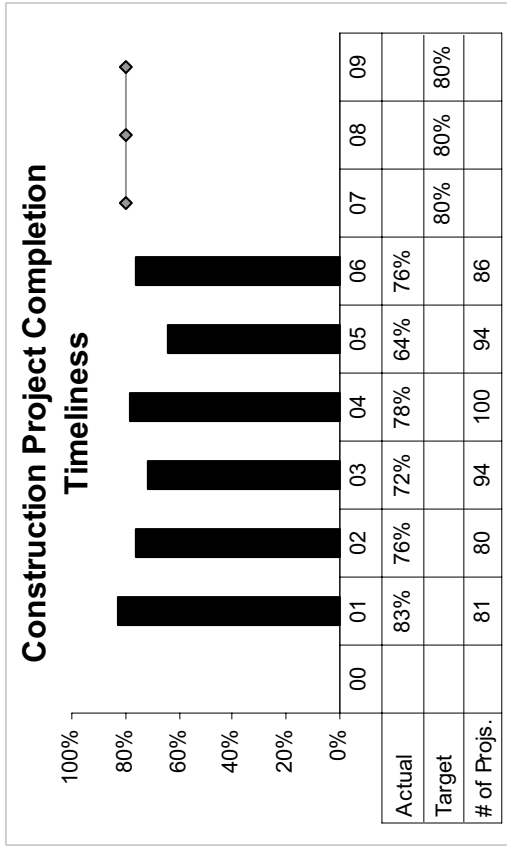
The 80% Target for this measure is higher than the 6 year average of 75%, but slightly lower than the 83% on time delivery of the best year. The Target of 80% is a goal that has been demonstrated to be attainable, but is above the current on time percentage.

3. HOW WE ARE DOING

The current on time delivery of 76% for State Fiscal Year 2006 is slightly better than the 6 year average of 75 %.

4. HOW WE COMPARE

Accurate comparisons between Oregon's 2006 76% average on time delivery to other state's on time delivery may not be possible due to differences in



OREGON DEPARTMENT OF TRANSPORTATION

III. KEY MEASURE ANALYSIS

Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

KPM #19	BIKE LANES AND SIDEWALKS Percent of urban state highway miles with bike lanes and sidewalks in “fair” or better condition	Measure since: 2005
Goal	PROVIDE A TRANSPORTATION SYSTEM THAT SUPPORTS LIVABILITY AND ECONOMIC PROSPERITY IN OREGON	
Oregon Context	Oregon Benchmark #72: Road Condition, ODOT Goal 3: Move people (and goods) efficiently	
Data source	Bicycle/Pedestrian Program, Highway Division, ODOT	
Owner	Bicycle/Pedestrian Program, Highway Division, ODOT, Sheila Lyons, 503-986-3554	

1. OUR STRATEGY

This measure reports the performance of ODOT in meeting community needs for bike lanes and sidewalks. This has been a priority in Oregon for many years. Oregon Revised Statutes have established a Governor appointed Oregon Bicycle and Pedestrian Advisory Committee, that requires bike lanes & sidewalks be provided as a part of road construction projects, and have mandated that a minimum 1 percent of the state highway fund be used for bike and pedestrian facilities.

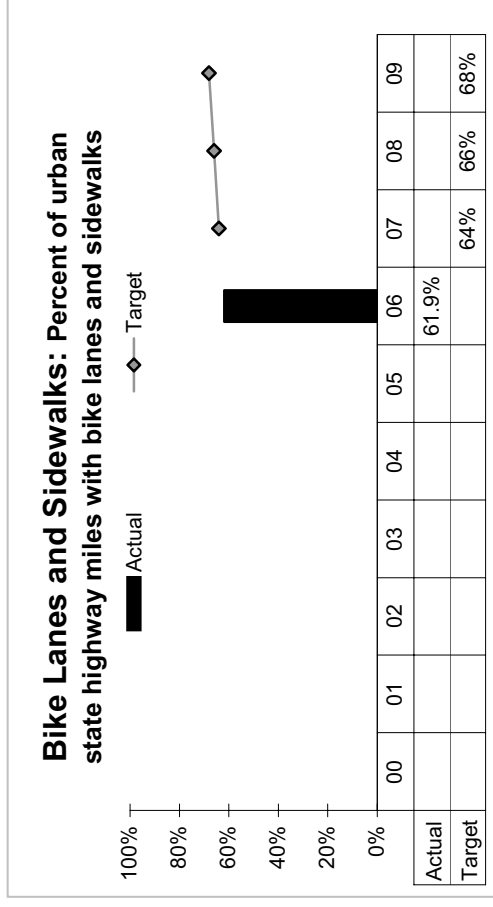
The measure has been recently revised to more adequately reflect the goals of the program and establish realistic targets for bike lanes and sidewalks. Actual community needs for bike lanes and sidewalks will be determined and existing facilities will be inventoried.

2. ABOUT THE TARGETS

Targets are based on total roadside miles that have been determined to warrant bicycle and/or pedestrian facilities. Bicycle facilities are warranted for 100% of state highway roadside miles, but pedestrian facilities are commonly warranted for less mileage. Couplets, (where a state highway separates into two distinct roads within towns and cities) also affect warrants for pedestrian facilities because sidewalks are usually appropriate for both sides of both roadways. Total miles for each type of facility are added together to determine the percentage. These targets may need adjustment as additional data is gathered.

3. HOW WE ARE DOING

The program is considered a success based on positive feedback from communities that have received technical assistance and other efforts to monitor program outcomes. The current effort will concentrate on populating this performance measure with complete data for all state highways in cities and urbanized areas across the state. This information will be used to establish program direction and monitor progress.



Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

4. HOW WE COMPARE

There are no standards or measures, either national or from neighboring states, with which to compare our progress in this area.

5. FACTORS AFFECTING RESULTS

As this is a renewed effort to acquire the most current data, results will likely see some changes as additional small cities and urbanized areas are inventoried and assessed.

6. WHAT NEEDS TO BE DONE

ODOT staff has worked hard to define a meaningful new measure for this program with improved data quality and availability. Staff will spend the next two years continuing the effort to inventory and assess all highways in urbanized areas and small cities. As additional data is gathered, reports will include increasingly current and complete data. Staff will also work to identify the best methods and cycles to update program data on a regular basis. The effort to update data will greatly assist in decision making concerning program direction and activities.

7. ABOUT THE DATA

This report is based on data from a very limited inventory of Oregon Routes 99W, 22 and 223 where they pass through the cities of Corvallis, Dallas, Eugene, Monmouth/Independence, McMinnville, Salem and Amity. It does not include inventory and assessments of any other cities on these routes nor other routes as they pass through these cities. This inventory was completed using the highway video log and the findings were validated in the field. Data for additional cities and highways will be added over the next two years as a concerted effort to update the current inventory is carried out using a similar process for all state highways where they pass through urbanized areas and cities. Once this inventory is complete, the reporting cycle is anticipated to be based on a federal fiscal year because the summer seasons will be the optimum time for field validation. Urbanized areas are those determined to have a population density that meets the federal definition for the area bordering the highway. All small incorporated cities are also included, but many of these may not have the level of population density to meet the federal definition. Sidewalks must be present, five feet or more in width and in fair or better physical condition. Provision of bicycle facilities are considered “good” if a marked and striped bike lane, five or more feet in width, is present or a multi-use path is present within the right of way. Provision of these facilities is considered “fair” if a paved shoulder alternative is present that is five feet or more in width or when a travel lane is shared by both bicyclists and motor vehicles where the posted speed is 25 MPH or less. The bicycle/pedestrian program will be able to make city or route data available once the inventory is completed.

Here is a breakout of the percent of urban state highway miles with bike lanes and sidewalks in “fair” or better condition for each of the seven communities inventoried:

Monmouth/Independence	43.5%
Eugene	55.8%
Amity	56.4%
Corvallis	63.5%
Dallas	63.5%
McMinnville	65.4%
Salem	69.4%

OREGON DEPARTMENT OF TRANSPORTATION

III. KEY MEASURE ANALYSIS

Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

KPM #13	ALTERNATIVES TO ONE-PERSON COMMUTING Percent of Oregonians who commute to work during peak hours by means other than Single Occupancy Vehicle.		Measure since: 2000
Goal	MOVE PEOPLE AND GOODS EFFICIENTLY		
Oregon Context	OREGON BENCHMARK #68: REDUCING TRAVEL DELAY & #70: PROMOTING ALTERNATIVES TO ONE-PERSON COMMUTING		
Data source	Oregon Population Survey, Oregon Progress Board		
Owner	ODOT, Public Transit Division, Dinah Van Der Hyde, 503-986-3885		

1. OUR STRATEGY

Transportation Options: Promote the use of transportation modes other than SOV's by improving existing facilities and increasing transportation options where possible in order to reduce travel delay and stress on the highway system and ensure multi-modal options for Oregonians.

2. ABOUT THE TARGETS

Higher percentages are better. The target of 30% was felt to be aggressive at one time, but some analysis might be called for to determine if adjustments are appropriate in 2007 if 2006 continues to show results at or above target.

3. HOW WE ARE DOING

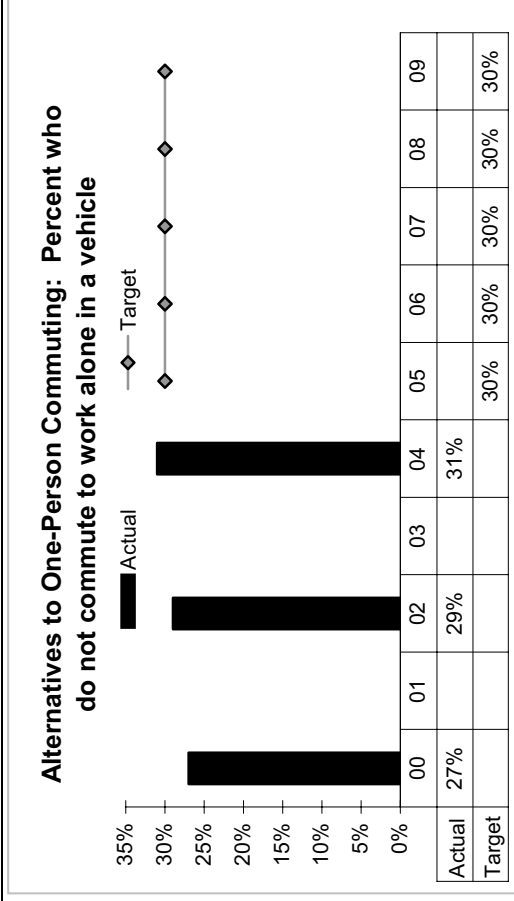
The proportion of Oregonians commuting during peak hours by means other than a Single Occupancy Vehicle (SOV) is essentially at target level.

4. HOW WE COMPARE

This is a measure of commuting choices during peak hours, but Oregon does compare well nationally when looking at commuting choices during all hours. Oregon achieved better than average results as compared to results for the U.S. based on census figures for 2000 (27% for Oregon compared to 24% for the U.S.).

5. FACTORS AFFECTING RESULTS

Efforts to reduce SOV commuting are impacted by the fact that many people combine their commute with household trips to help balance the time demands of work, home, children and travel. Economic factors also have an affect, such as fuel prices and increases or decreases in growth.



Agency Mission: To provide a safe, efficient transportation system that supports economic opportunity and livable communities for Oregonians.

6. WHAT NEEDS TO BE DONE

The current program is working and should be maintained and improved where opportunities exist. ODOT's Transportation Demand Management program will continue and improvements incorporated. As new techniques and strategies develop, they will be applied where appropriate.

7. ABOUT THE DATA

This measure is reported based on data from the Oregon Population Survey sponsored by the Oregon Progress Board. The survey is conducted using methods that produce statistically valid and reliable results. It is conducted every two years which means data is reported every even year.

APPENDIX 6



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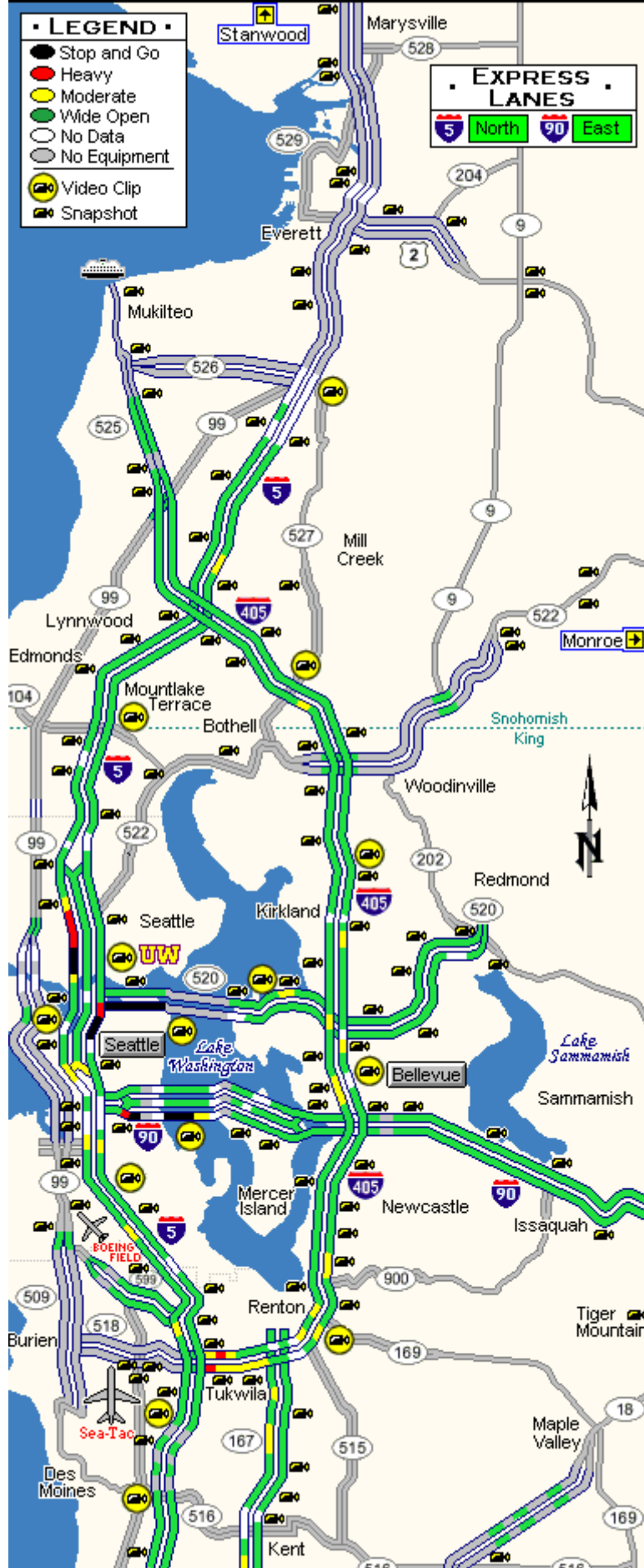
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APPENDIX 7

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<http://www.wsdot.wa.gov/Traffic/seattle/default.htm>

Traffic Conditions as of: Feb 01, 2008 1:34 PM PST



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