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**Thursday 31 March 2005**

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**Jeudi 31 mars 2005**

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Provincial Auditor:  
Ministry of Transportation

**Comité permanent des  
comptes publics**

Rapport annuel 2004,  
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Chair: Norman W. Sterling  
Clerk: Susan Sourial

Président : Norman W. Sterling  
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LEGISLATIVE ASSEMBLY OF ONTARIO

ASSEMBLÉE LÉGISLATIVE DE L'ONTARIO

## STANDING COMMITTEE ON PUBLIC ACCOUNTS

## COMITÉ PERMANENT DES COMPTES PUBLICS

Thursday 31 March 2005

Jeudi 31 mars 2005

*The committee met at 0935 in room 1, following a closed session.*

### 2004 ANNUAL REPORT, PROVINCIAL AUDITOR

#### MINISTRY OF TRANSPORTATION

Consideration of section 3.14, maintenance of the provincial highway system.

**The Chair (Mr. Norman W. Sterling):** Welcome to the committee. The committee will be sitting until 1 o'clock, and then we will sit after question period, if necessary. It hasn't been necessary to date, and I wouldn't anticipate that to be the case today, but who knows where it will go. Deputy Rafi, do you want to introduce those people who are with you? Perhaps just Carl, who is sitting with you. If you require the input of other people, you can introduce them as they come forward. If you have some opening remarks, we'd invite you to give those now.

**Mr. Saäd Rafi:** Thank you, Chair. First off, good morning, Mr. Chair and members of the standing committee on public accounts. As the Chair has mentioned, my name's Saäd Rafi. I'm the deputy minister of transportation. To my left is Carl Hennem, our assistant deputy minister of the provincial highway management division. We have four staff with us who, as the Chair suggests, I will introduce if we require their assistance. I'd like to thank you for this opportunity to discuss the Auditor General's report and our responses and improvements associated with it. I'd also like to thank the Auditor General for his many positive recommendations, which will help us achieve, I think, many more higher levels of performance in the ministry and for the highway corridor.

The Auditor General recognized the progress that has been made in improving maintenance procedures since 1999, when the last provincial audit was done in this area. This process has allowed us to examine how we can continue to improve the cost efficiency and effectiveness of our maintenance measures while ensuring our highways and bridges are safe and well maintained. We take these recommendations very seriously, and I'm pleased to report that we're taking action on or have already implemented all of the report's recommendations.

Our ultimate goal is to make Ontario roads safer. According to the latest Ontario Road Safety Annual

Report, we have the safest roads in North America. However, we're committed to continually improving on our record. Our ministry is a recognized leader in highway management practices, and a number of other jurisdictions come here to learn from us. Nevertheless, we are continually striving to improve our performance by providing leading-edge maintenance technology and developing a world-class and cost-efficient asset management framework.

This morning I'd like to focus my remarks on three key areas: the managing of maintenance contracts, measuring and reporting on performance, and asset management. I'll begin with managing maintenance contracts.

The Auditor General's report recommends that in order to manage maintenance contracts more effectively, the ministry should provide coordinators with more specific guidelines so they can perform their inspections more effectively. I'd like to thank the auditor for this recommendation, which highlights something that we take very seriously: our stewardship of a vital provincial asset and the importance of monitoring the quality of our contractors' work.

The ministry has detailed guidelines for our coordinators to provide direction for consistent and unbiased monitoring. Contract administrators undergo a comprehensive training program, and a refresher course for contract monitors is currently under development to provide updated instruction on new and revised processes. But as the auditor has correctly pointed out, the ministry needs to and will work toward continually improving its ability to manage maintenance contractors by making inspection guidelines more specific. We are currently reviewing our monitoring priorities, frequency, documentation and the reporting of our results. Methods made possible by advanced technology will also be examined and the results of this review will be incorporated into an update of our monitoring manual, and also into the maintenance contract administrator refresher courses that we provide. We expect this work to be completed by March of next year.

The auditor also recommended that the ministry implement systems for managing and analyzing data for inspections, violations, complaints and claims for damages by highway users, along with the service levels that we achieve. We thank the auditor for this timely recommendation, as new technology and systems for managing and analyzing data are now becoming avail-

able to us. For the past two years, we've been actively conducting field trials of a global positioning system, or GPS, and Internet-enabled mobile electronic diaries that were referred to in the auditor's report to record and provide key information to contract administrators.

#### 0940

Our commitment is to making Ontario's roads even safer, despite the fact that traffic volumes have continued to increase. For example, traffic on our provincial highways increased by over 5.3 billion vehicle kilometres between 1998 and 2002, yet the number of fatalities per 10,000 licensed drivers declined by 6.3%. We're very proud of that.

In his report, the auditor also recommended that MTO take such steps as reviewing regional procedures and records to ensure fairness and consistency across the province of the sanctions we applied to contractors for violations. I want to thank the auditor for his recommendation on this important issue. We take the matter of violations extremely seriously, and so do our contractors, as it affects their ability to secure future work.

We are proud of our contractors and the work they do, both in their consistency of delivery and in their adherence to standards. Our contract administrators are trained in dealing with non-conformance and the imposition of sanctions. If a contractor fails to meet the terms of a contract, we have a protocol in place that provides clear direction on how sanctions are to be applied, and potential sanctions are set out in the language of each contract. Regional management then reviews the appropriateness of the sanction and, finally, head office staff are available for consultation if the violation is unusual or indeed complicated.

Currently, the ministry uses data from a variety of sources to establish inspection frequencies and monitor contract performance. We have a database of contract violations that is updated every month, and we are actively exploring ways to ensure consistency across the province in both our procedures and our decisions. In addition, to respond to the recommendation, we are implementing a centralized database to continuously track sanctions and create review processes, including a more formalized head office role. This additional review will strengthen provincial consistency and fairness in applying our sanctions.

I'd like to move now to measuring and reporting on performance, beginning with the impact of salt use on our environment, a very critical issue. The Auditor General recommended that in order to identify and better manage the impact of salt use in our environment, the ministry should take the necessary steps to properly monitor salt use and work with the Ministry of the Environment to establish ongoing testing and tracking of the impact of salt. Our environmental responsibility is important to us. We're constantly working to refine our technology and to better monitor salt use. Ontario is recognized as a national leader in salt management best practices and has actively participated in the Environ-

ment Canada multi-stakeholder working group on this very subject.

We're always looking at new winter maintenance technologies that will help us improve salt management and safety, such as the development and implementation of automatic vehicle location systems, or AVL. AVL provides real-time, accurate information, such as the location of our plows and our spreaders and the amount of salt they put down on the highway. We are continuing to refine this AVL technology, and we are developing a system of automated reports that will help improve salt use monitoring, as recommended. In addition to AVL technology, we have deployed something called ARWIS, which is the advanced road weather information system, now for several years. This allows for computerized spreader controls, the pre-wetting of various mixtures that are applied to the highway and infrared thermometers to ensure that the appropriate amount of salt is applied, therefore benefiting the environment. Lastly, we are working with the Ministry of the Environment on a new environmental monitoring project, which is intended to demonstrate the impact of reduced salt use. This is to be completed in the fall of this year.

The ministry and the auditor both recognize the need to provide the most efficient and effective delivery of highway services. The ministry agrees with the auditor that in order to make the best use of funds, our prioritization process should allow preservation and prevention methods to compete with all other projects for funding based on a full cost-benefit analysis. To this end, we are currently implementing the asset management business framework, which will allow for a more consistent means to prioritize all our highway investments. We have shown leadership amongst North American transportation agencies in the development of this very framework.

With this implementation, we can apply a consistent and very long-term view for highway management. This framework allows us to make the right investments in the right place at the right time. It encompasses all infrastructure assets and all phases of the investment cycle, from planning to construction to maintenance. This will help us improve the condition of our highway infrastructure and deliver greater cost efficiencies, along with increased justification for the dollars spent. Additionally, it provides timely and reliable information and greater public accountability. We're moving away from a "worst first" approach to a full-life-cycle costing approach in rehabilitating our highways. This allows flexibility in the treatment of assets. Less expensive treatments can be applied and used in rehabilitation earlier, thereby reducing the overall cost and extending the life of the pavement.

The ministry has concentrated expertise and effort in this area for a number of years, developing and implementing world-class technical analysis and tools for highway management. In his report, the Auditor General also recommended that the bridge management system should contain complete and accurate information, in-

cluding details of recent structural maintenance work, and that key aspects of each structure must be inspected.

It is noteworthy that the Canadian highway bridge design code is based on the Ontario highway bridge design code, which was developed by the ministry. In addition, Quebec, Nova Scotia and Saskatchewan use the Ontario structure inspection manual for bridge and culvert inspections. We're understandably proud of that. We provide this bridge management system, or BMS, to Ontario municipalities through the Ontario Good Roads Association at no cost to them. The city of Toronto is currently in the process of implementing this very system.

While we are confident in the reliability of the BMS, we agree with the importance of continually improving our processes. We're currently reviewing the data in this system to modify it to address the report's recommendations. It was recommended that the BMS automatically generate a report on all overdue bridge inspections. We are currently modifying the system to ensure that a notification flag, if inspection reports are not filed every two years, comes to our attention.

We remain totally committed to working with our municipal colleagues and providing them with the tools, such as the bridge management system, to help them improve management of their roads and bridges. The ministry has led the establishment of a joint working group, made up of the Ontario Good Roads Association, who represent approximately 90% of Ontario municipalities, and the Ministries of Public Infrastructure Renewal and Municipal Affairs and Housing, to create a municipal asset management database for roads and bridges.

We also continue to make municipalities aware of their bridge inspection responsibilities through federal-provincial funding programs such as the previous Ontario small town and rural infrastructure fund, also known as OSTAR, and, most recently, under the Canada-Ontario municipal-rural infrastructure fund, known as COMRIF. Under COMRIF, a request for information is included in the application, asking municipalities to indicate that they have an asset management system and bridge inspection data in place.

We're working with the federal government, our partner in this program, to ensure a portion of the COMRIF funds is allocated to the development of asset management capabilities amongst municipalities. The auditor recommended that the ministry implement performance measures dealing with the condition of assets under management and the cost effectiveness with which resources have been employed to manage the province's highway system, and to report annually on those results.

I'm proud to say that we are improving our efforts in this regard. Certainly, performance measures have been used for many years in MTO. For example, for the pavement, bridge and maintenance offices, we have monitoring systems in place that report on data collected on an annual basis, including time to get to bare pavement after winter storms, and on pavement and bridge conditions.

The auditor recognized the current work being done on performance measures through the implementation of our asset management framework, which I mentioned earlier. This emphasizes appropriate management decision-making, and it will help us meet the auditor's recommendations. We have other measures under consideration in this framework, such as looking at how we value the assets and how we look at the remaining service life of our assets.

Also in response to the auditor's recommendation, we are currently working on developing a quarterly report to provide the status of activities that will affect our performance measures. In addition, we are developing training programs in the use of all asset management tools, including performance measures for all our staff.

A new integrated inventory monitoring system is also in development that will enable more current and automated comparative analysis and reporting. The ministry will also implement the auditor's comments on contract administrator documentation through annual updates to our inspection manuals, our contract officer manuals and the consultant performance appraisal system that we use to judge our consultants.

To conclude my remarks today, let me once again thank the Auditor General for his recommendations, and also the Chair for the opportunity to present to the standing committee on public accounts. Although we are proud of our performance and of our professional and dedicated staff, we recognize that there's always more that can be achieved. Our commitment is to continual improvement, and by continually examining and adopting the best and most cost-effective design, construction, maintenance and highway management practices, Ontario will continue to provide leadership in highway infrastructure management and deliver maximum value to Ontario taxpayers. Most importantly, we'll keep Ontario's roads the safest in North America, as is our hope.

Again, thank you for the opportunity to address the Auditor General's report. We'll be happy to take questions.

**The Chair:** OK. Do we have any questions? Julia.

**0950**

**Mrs. Julia Munro (York North):** Thank you very much for coming here this morning. I wanted to ask a question that relates to the first part of your presentation on the issue of the maintenance contracts. In the auditor's report, it details the manner in which the contract administrator is able to impose sanctions where required. I wanted to ask you a question with regard to that. Do they improve? Are these relatively oversight kinds of situations?

The reason I wanted to know was the issue, then, of not renewing a contract at some point because of the sanctions. What kind of experience have you had in that whole area of how well they respond to the sanction issue? Do you have to not renew contracts because of it? I wonder if you could give us a sense of that process and how effective it is.

**Mr. Rafi:** Sure. At a general level, anyhow—and I'll ask Carl to address some of the types of sanctions we apply—our contractors' performance has been, I think, examined by the auditor and found to be in high compliance with the standards that we set for them. We do believe that that is actually a function not just of LAC standards but of their adherence and of our experience over several years in that regard with them.

There is a demerit point system that we use for sanctions that allows us to increase the demerits, which has a financial penalty. We would obviously look at public safety as the ultimate concern that we would have. We're quite pleased to be able to say that we don't have examples of public safety being compromised, but, of course, depending on severe weather conditions or what have you, they may not meet the threshold standard each and every hour of their requirements.

To give you an indication of some of the specifics, perhaps I'll ask Carl to respond.

**Mr. Carl Hennem:** In the contracts, as the deputy explained, we have pre-set schedules for what happens if the contractor does not meet our requirements. These could be points that accumulate up to a certain level, or it could, in fact, be financial penalties. Yes, we have applied these on a regular basis. I'm happy to say that we are quite impressed with the performance of our contractors, quite frankly, but things do happen.

The penalties or the points are for a whole range of types of shortcomings that could be anything from not keeping proper records, for example, to not showing up on time for a snowstorm, or using the wrong material on the highway for anti-icing and de-icing purposes and so on. So we have applied these on a regular basis. The contractors take these things very carefully.

As you know, we have a competitive environment for awarding our contracts, and they operate on probably not a very generous margin, because there is keen competition out there. So penalties such as financial penalties are taken very seriously. In addition, of course, we have discussions with them about what they're going to do in order to prevent these things from occurring again. I can guarantee to you, they don't take these things lightly, and they have some very serious discussions with us as to the fairness and consistency in the way we apply these things. So far, we have not gotten to the stage where we have contemplated any break of any contracts or refusal to renew contracts.

**Mrs. Munro:** Given what you have said with regard to what I would agree with, that people would want to take those very seriously, my second question, then, has to do with the issue—and you have just alluded to this, but I'd like a further conversation about it—of the competition and the fact that this process does depend on a healthy, competitive environment. I wondered if you could comment for us on whether you see any challenges with retaining that healthy, competitive environment. Obviously, in this particular area, as is the case with many others, there are huge capital investments required for anyone to contemplate being part of the competitive

process. It would seem to me that you might have some parts of the province where this is a healthier environment than others. I just wondered if you could comment on this, because I do think it's a very, very important part of the province's ability to maintain the kind of standards that you're looking at.

**Mr. Rafi:** We have actually gone through another round of competitive tenders for areas that have come up for renewal throughout the province. Whether it's in less populated areas of the province or more densely populated highway networks within the province, we've been very pleased to see a healthy environment. We have seen the willingness of companies to come with their bids in the blind, sealed approach that we have, with numerous companies applying for each and every contract. There is competition. If a company didn't get the last one, they are sharpening their pencil, and that's creating a benefit to the taxpayer by lower bid prices for these jobs and these contracts, as well as investment in equipment. Some companies are, at the beginning of a contract, identifying that they're investing in brand new equipment that they will capitalize over the life of the contract. We have aided that—investment as well as competition—by having varying lengths of contracts so that they can bid on a five-year, seven-year or nine-year schedule and we can prepare prices across those schedules and take the best price for us. It allows them to decide how they want to capitalize certain assets, what the age of their equipment is and so on. So it's allowed us to maintain a healthy, competitive environment and not to have to make capital investment in equipment.

**Mrs. Munro:** To me, this would be the key factor in terms of being able to continue. There are those companies, then, that are still looking at being able to get in on the next round, so to speak, and it very much is dependent on that.

I hear the area of responsibility for a coordinator talked about, but would you also make some of the contracts different sizes in terms of being able to attract different competitors? Is that part of your planning process?

**Mr. Hennem:** In the first round of contracts we typically had what we call the clusters of the area maintenance contracts, which sort of let the contractors bid on one of them, two of them or all three of them. We would then compare the best combined price of all these and pick the ones that would give us the best return on our investment, so to speak. We have continued that in some cases as well in the second round.

I should also mention to you that we do have two types of contracts out there. One is what we call the area maintenance contract, where the contractor manages the process and does all the work, and we just do the quality assurance. The other type of contract is what we call the managed outsourcing contract, where we actually do the management but use contractors to do all the work. These contracts are smaller contracts on a functional basis. Typically it may be one contract for winter maintenance in an area, it may be one contract for pothole patching, it

may be one for other things like patching or short resurfacing contracts, that sort of thing.

In addition, I should say, with respect to your concern about the smaller groups, in the area of maintenance contracts the contractors typically have subcontractors, which then allows the industry in general to access our work out there.

But you're quite right; one of the most important pieces for the success of outsourcing is to maintain the competitive element, and I think we have been extremely successful in doing that. We keep a close eye on the tendering process and the award process to make sure we are proactive in that regard.

1000

**The Chair:** The Provincial Auditor wanted to add a comment.

**Mr. Jim McCarter:** We did look at that. We were concerned, especially in the less populated areas, whether you had a situation where you only had maybe two bidders, and it's like, "Bob, you take this one; I'll take the next one." We actually found, Mrs. Munro, that they had at least three bidders for all the contracts. We were certainly satisfied that it was a good, competitive process.

**The Chair:** From the Liberal caucus, I have David Zimmer, Ms. Sandals and Mr. Lalonde, and now I have Bill as well.

**Mr. David Zimmer (Willowdale):** I gather that the past history of how the money gets passed out at the ministry is that it has essentially been by envelope funding, and this new asset management business framework is to enable you to work out some priorities rather than just your envelope funding. Is the asset management business framework going to prioritize within an envelope or is it a global prioritization?

**Mr. Rafi:** Given your juxtaposition, I would suggest that it's a global look at the province's assets, to manage them on multiple indices. It's really a business process whereby we are using everything from corridor plans in each region of the province's highway network, segment by segment, to have an assessment of the asset state and to then apply various business measures to determine what levels of rehabilitation you need to spend money on at what time. It gives us an overall picture of the asset at any point in time. Frankly, it has been deemed as the most sophisticated approach to valuing, addressing and maintaining what is a significant investment, and built-up investment over time, in the asset network. It isn't really looking at, "You get a certain amount for this region, this region and that region," as much as it's saying, "Where do we best apply funds to ensure preservation of the asset as well as expansion?" That is a balance that has to be struck and has to be struck most effectively.

**Mr. Zimmer:** But to date it has essentially been envelope funding, so are there two processes to prioritize within the envelope and is there another process to move money from one envelope to another? Thirdly, if the decision is to move money on a priority basis from one envelope to another, how quickly are you able to do that?

**Mr. Hennem:** Essentially the asset management process we're putting in place is a planning process, a management process, a decision process, and it will provide us with better information as input to the budgeting process, which in turn creates the envelopes you're talking about. The envelopes basically will allow the government to track the various types of investments they make. The process we're putting in place is to enhance the advice that we can give with respect to where to make the best possible investments. The funding, hopefully, will be influenced by that and created on the basis of where the best strategies lie in order to maintain a certain piece of highway or the overall network itself.

**Mr. Zimmer:** Is it safe to say, then, that in fact we're moving away from envelope financing?

**Mr. Hennem:** I don't know if it's really important whether they give us funding in certain envelopes as long as they have the right information from us to create those envelopes in the first place. That information will look at all the possible strategies for maintaining a piece of highway, whether it's expansion for certain reasons, rehabilitation or preservation types of projects, to maintain the highways while we're waiting for the level of deterioration required for full rehabilitation.

**Mr. Rafi:** If I might just try to expand on that, to try to address your question, on the matter of envelope funding, I don't think I'd characterize our funding in that way actually. What I would suggest is that we have our annual capital budgeting cycle with multi-year planning, so that it isn't a matter of saying that you have X hundred million dollars for rehabilitation, and you figure out how you spend it that way. It's far more detailed than that.

What we're providing on an annual basis to the capital plan, and then to cabinet for its approval, is a detailed assessment by highway corridor as to what is relevant for expansion and why, because of the economic aspects of these corridors; what is necessary for rehabilitation and maintenance and why. That's where the manager framework comes into play, because we can quite deliberately and in a detailed manner identify that a dollar spent today is saving X amount of dollars over the long term if we rehab now versus waiting. So if you want to call that an envelope-based approach, I would say that the size of the envelope, if you will, varies year over year, because they're looking at it on a multi-year planning basis with annual budgeting approval.

**Mr. Zimmer:** I guess my concern is—my experience has been that once money gets put into an envelope, it's hard to get it out. It tends to stay there. And there's a built-in incentive to use up the money in the envelope. My question is, on the new asset management business framework, how quickly are you able to move money from one envelope to another envelope in keeping with the overall asset management priority?

**Mr. Rafi:** I would say that it's as immediate as necessary. It's the most transparent method of managing critical assets that one could have, because we have to be able to account for why we're spending that money. It isn't a matter of a gross amount, as I mentioned earlier:

“Let’s hurry up and burn that capital, because we’re coming to the end of the fiscal year.” That happens to apply for a few reasons, not the least of which is that we’re talking about highway capital expenditures, which are not quick expenditures. A commitment today will have a multi-year impact, because it will start with planning, design, construction, and then rehabilitation and maintenance.

It’s unlike operating funds, where the ability to move money from within and to address priorities is there, but since we have a multi-year planning approach with individual life-cycle costing for individual segments, I think it’s not only transparent but it allows the government to decide where it wants to put its emphasis. It also allows us to make the case properly and as significant to engineering standards as possible, to say, “This should be rehabilitated, this should be and so on.”

**1010**

**Mr. Zimmer:** My last question: How is that actually done, if you find yourself in conflict with an envelope manager who has a compelling argument to use the funding in the envelope and you find that compelling argument is in conflict with the bigger asset management argument? What’s the process for sorting out that debate or resolving that conflict?

**Mr. Rafi:** The debate doesn’t exist if you can’t prove the need for the funding, and the need for the funding starts fundamentally from an asset valuation, an asset assessment base. Secondly, we are constantly balancing the request for expenditure between expansion and rehabilitation/maintenance. Obviously, given the fact that Canada is a strong trading nation and given the fact that the US is our border partner, the highways become key economic corridors. While we undertake expansion in certain areas—for example, Windsor—we are also undertaking rehabilitation at the same time in some of those areas. Those prioritizations are balances and trade-offs that are made by the priorities that are set both economically and by the application of this asset management framework, which allows us to make critical choices that in the past were made based on, I would say, engineering expertise. Now it’s raised to the next level of expertise, business acumen, as well as need from an engineering point of view.

**Mr. Zimmer:** Who’s the actual body or person or committee that resolves that conflict? There’s an envelope, overall asset management conflict. Does the deputy do that?

**Mr. Rafi:** No. Our plans are prepared, submitted to the minister for review, as you would likely know, and then we work with public infrastructure renewal, which manages the government’s capital expenditures across its entire enterprise. Those decisions are then assessed based on other priorities in other sectors and taken to cabinet for approval, and then we’re given our allocations, just as we are with operating expenditures, through our annual results-based planning.

**The Chair:** We had approximately 10 minutes from Mrs. Munro and about 10 minutes from David Zimmer,

so I’m going to give Mr. Prue 10 or so minutes to lead off and then we’ll go back through the rotation.

**Mr. Michael Prue (Beaches–East York):** I don’t know that I need the whole 10 minutes. I’m most interested in the whole controversy around salt. Since you have in the past two years done all of these wonderful things that I’m reading about here, how much has tonnage gone down in Ontario? What’s the actual reduction in salt, or has there been any?

**Mr. Hennem:** As you know, the amount of salt that we put down is highly dependent on what kind of winters we have. So you will not be able to find one trend; it depends on the severity of the winter, the frequency of snowfalls, temperature fluctuations. Typically we’d use more salt if it hovers around the zero mark, because you get freezing and thawing, for example. It’s a matter of the type of winters that we have; it’s variable. It’s difficult to compare from year to year, although we are at the moment developing what we call a winter severity index, together with other provinces in Canada and with the United States, and we’re trying to come up with the possibility of making those comparisons that you are referring to there.

**Mr. Rafi:** In addition, we are trying to establish a goal of perhaps as high as a 20% reduction in overall salt usage. As Carl has indicated, there is huge variability in that. But ultimately, with some of the technology that we’ve put in place, the GPS and mobile AVL technology that I referred to in my remarks, we have a more accurate indication of both the spread of salt and also various techniques that we’ve applied, like pre-wetting of salt to ensure that it stays where it’s applied. So if I could say so in this manner, it isn’t just about how much, but about spread rates, amount of spread, its application and where it stays, so that environmental degradation is minimized as well.

**Mr. Prue:** I’m from Toronto. I try to get out of Toronto in the wintertime because the snow here is all black. It’s not very nice. I’ve noticed in the city that they tend to do less plowing and more salting. Are we doing that in Ontario? Some of the side streets don’t get plowed any more since amalgamation; they get salted and salted again and salted again. I would have to think that the amount of salt being used in the city of Toronto is up hugely and the amount of plowing is down equally. Is that a phenomenon that is happening elsewhere around Ontario roads?

**Mr. Hennem:** We use both plowing and salting, and sanding, for that matter. It just depends, of course, on the amount of snowfall and the temperatures as well. Salt can only be used down to a certain temperature and after that it’s not effective, so we would use sand in those situations. We do use snowplowing as one of our major activities. In fact, most of our equipment now is combination units, with both a plow and a salt spreader on the trucks themselves. We are not proceeding with what’s sometimes referred to as the salt option, as you know, which is just trying to melt the snow in place.

**Mr. Prue:** All right. So this is happening more so in the city of Toronto than in Ontario itself, this whole use of salt as opposed to plowing?

**Mr. Hennem:** I can't speak for the city of Toronto. We don't monitor their processes.

**Mr. Prue:** Since you've started trying to use less salt, what has been the impact particularly on the bridges and the roads? Obviously, if you use less salt, there will be less rotting out of the infrastructure under the bridges. Again, using Toronto examples—I'm sorry; I'm just a boy from Toronto—the Gardiner Expressway had to be pulled down because it got too expensive. The salt completely destroyed that highway. Have we noticed any improvements on our bridges in Ontario if and when the salt has been reduced, which I'm not sure it has, from your answer?

**Mr. Hennem:** I think there are improvements on our bridges, but I don't think the main reason is the amount of salt we use. We have different standards for designing bridges these days than we had some 30 or 40 years ago.

**Mr. Prue:** But half the bridges in Ontario are still 30 or 40 years old. I drive over them too. They're no different.

**Mr. Hennem:** That's right, but we're talking about reductions. There's still going to be salt on the bridges and if they reach, for example, the reinforcing steel on the bridge, they're still going to start corrosion. So what we do instead is try to prevent that. For example, in areas on the structure that can be exposed to salt, we are using stainless steel in some cases, or we use coated rebars in some other areas. We also use a thicker cover of concrete over the rebars to prevent salt from seeping into the actual metal itself. We use different bridge deck sealing, and so, on to prevent that sort of thing.

In the deterioration of the structure, it's not so much the amount of salt as the fact that salt reaches these critical things like reinforcing steel. We have to design them in such a way that we prevent this from happening.

**Mr. Prue:** I think that's close enough to 10 minutes. Thank you very much.

**Mrs. Liz Sandals (Guelph–Wellington):** Just to a note to Mr. Prue, that I can tell him that Guelph is less slushy than Toronto. I can actually tell you where the maintenance contracts change driving along the 401, because I can see the change in practice, which probably means I spend too much time driving up and down the 401.

I'd actually like to ask a couple of questions. One is about the internal audit that was done by MTO. Congratulations to the ministry for doing this, and obviously sufficiently thoroughly that the auditor has just included your internal work in his report. But on page 353 it references the issue of the quality of work by design consultants. This is a particularly hot issue in Guelph, because we did have the instance of Hanlon Highway 6 north, an interchange being built, where I take it, due to design flaws, construction actually had to stop. It had to be redesigned. Some of it had to be rebuilt. It was quite a fiasco. I'm wondering if you could tell me something

about how that particular incident was addressed, if that's appropriate, and then more generally, how do you monitor to avoid that sort of fiasco in the future?

**1020**

**Mr. Rafi:** The specific incident that I believe you're referring to, if I understand it correctly, is one of the rare circumstances where we've had to take legal remedies with the design consultant because we discovered that there was an error in the design. That is a rare circumstance.

We've also, since our internal audit service, looked at the quality of work by design consultants. We've put in a few improvements to our current processes. I'd like to reference three of them.

One is implementing an engineering project management system, which will ensure that these designers have a sufficient amount of time for their projects. On occasion, that can be an issue.

Secondly, we're looking at improving our estimating tools, and we've added a refresher course and training module, up to two days, on estimating for staff. We've sponsored approximately 15 courses in this area of cost estimating.

The third area is to implement a system to track various change orders, because of course if there are change orders, they're likely associated with the initial design, and to determine how we can reduce change orders, which then has an impact on ensuring higher-quality design, which goes back to the first couple of changes we've made as well.

In the main, I think the work that the design consultants do is of a high calibre and is probably the more complex end of the business because one can't look at every foot of the proposed road network that they're designing. They have to take certain segments and sections and then extrapolate in that regard.

We're trying to take initial cost estimates, and before we put out the contract, we're trying to have final estimates so that we can keep change orders and overall prices of construction within finer gradations of 5%, perhaps 10%.

I think those measures will continue to see improvements, and we'll continue to try to improve the quality of our design as well, to speak to the specific issue you identified.

Maybe you'd like to add something.

**Mr. Hennem:** I just want to add that we do have a system now where all the consultants have to be pre-qualified in their specific disciplines and they can only bid on our consulting work if they have that pre-qualification. So they have to submit their qualification for scrutiny by a team of our staff, who are also experts in their area.

We also have instituted a performance evaluation system. When we do evaluate the submission from the consultants, we take three things into account: first of all, the quality of the submission itself; their performance in the past, so they can't just come and promise us good work—they have to actually have demonstrated this; and

of course the cost of the submission itself. So we put about 50% weight in that evaluation process on past performance.

**Mrs. Sandals:** Would you be able to create a feedback loop in that performance evaluation where, if they've done work for you previously, you would be able to look at the number of change orders, the accuracy of the cost estimates, so you can feed that back into a future contract?

**Mr. Hennem:** That's correct. I want to mention that the Consulting Engineers of Ontario, which is sort of the body that encompasses these people, also recognizes that there is room for improvements. I have a commitment from them that they're going to work closely with us to put additional quality control processes in place. Perhaps they will also introduce things like peer reviews of the designs and so on so we can minimize such unfortunate things as happened on the Hanlon Expressway.

**Mrs. Sandals:** Thank you. I am pleased with that reassurance, that you've addressed that, because there were certainly some problems with that.

The other question I've got has to do with this issue of routine maintenance and monitoring of contracts or setting the level of contracts for the level of maintenance. This really goes back to my days of being president of the Ontario Public School Boards' Association and a situation I'm aware of in northeastern Ontario a few years back, where they had a record number of snow days; that is, days when they had to cancel the school buses. I accept that the weather is variable. It wasn't that there was an ongoing blizzard or ice storm; it was just simply related to the fact that it had snowed overnight and that the plows hadn't been sent out early enough to clear the roads and, because nobody had cleared the roads, they had to cancel school buses and therefore they had to cancel school.

I'm honestly not sure whether that was a situation of the contract standard being set too low or whether it was a situation of the standard not being met. But where you have a situation like that, where the level of performance, for whatever reason, obviously isn't getting the road cleared on time, what do you do about that?

**Mr. Hennem:** We have performance standards in our maintenance contracts, both in the area of maintenance contracts and in the managed outsourcing contracts, which generally stipulate that the contractor has to be ready to get out of the yard, fully loaded with salt and with a plow in place, about 30 minutes after he gets the call to go out. Of course, the trick is therefore to call him out at the right time. In the area maintenance contracts, that's done by the contractor, and our monitors are watching what's going on to make sure they perform to standard. In our own areas, we are the people who call the contractors out.

What we have done in order to operate more timely—the deputy minister referred to our advanced road weather information system, which will give us pre-warning of precipitation as well as icing on the roads and so on, so we can forecast the conditions and we can be

more prepared to go out on time. This is one of the things that technology is helping us do in a more timely fashion.

**Mrs. Sandals:** So you've been able to improve, not just in the GTA but all over the province, the reaction—in my lay terminology—to sending the plow out when it starts to snow, as opposed to what was obviously happening in this case, which was, five hours after it stopped, we'll think about plowing.

**Mr. Hennem:** Yes.

**Mrs. Sandals:** You've been able to put in a more timely response.

**Mr. Rafi:** That's absolutely the case, as Carl has outlined. In addition, just to give you an indication of a specific performance measure, as a standard of bare pavement achieved after winter storms that is applied to our contractors, in 2003-04 the bare pavement performance results were 96%. So 96% of the time they achieved or exceeded their requirements for bare pavement after winter storms. We set our standard requirements at 90%, so we're pleased that they were surpassed yet again. There have been some fairly severe weather conditions. We've tracked this data going back from 1998 and I think in each and every year we've exceeded the 90% standard year over year. That tells us, as part of an earlier question as well, that our contractors take their requirements quite seriously.

**The Chair:** Mr. Lalonde?

**Mr. Jean-Marc Lalonde (Glengarry–Prescott–Russell):** May I pass it on to Mr. Mauro, because he has to leave?

**The Chair:** Sure.

**Mr. Lalonde:** I'll come back, though. I want to make sure that I get my question too.

**The Chair:** We're going to go to the other parties after Mr. Mauro.

**Mr. Bill Mauro (Thunder Bay–Atikokan):** I have a few questions but I just want to follow up on what Mrs. Sandals asked. You said that you have a 94% success rate or compliance rate of having bare pavement after snowfalls, but you didn't say how long after or, if you did, I missed it. Anybody can get it plowed after the snowfall, but if it's a week later, it's not doing us a lot of good, is it?

**Mr. Hennem:** That's correct. We classify the highways in terms of where they are and what traffic volumes there are on them. For example, we have standards for exactly what you're talking about, for what we call class 1 highways, where if traffic is greater than 10,000 vehicles per day, the bare pavement standard is eight hours after the storm.

**1030**

**Mr. Mauro:** What about when it's less than 10,000 vehicles?

**Mr. Hennem:** If you're in northern Ontario, on the Trans-Canada, for example, that's a class 2 highway, which is between 1,500 and 10,000 vehicles per day, and the standard is 16 hours after the snowstorm is complete.

**Mr. Mauro:** And you can justify that just because of lower traffic volume? If this is a safety issue, how do you

apply a rule like volume of traffic to a Trans-Canada Highway, which is the only link, the only method—no other options exist for people to utilize to go east-west in this country, and because it's a lower traffic volume, you apply a different standard to it. How do we justify a decision like that?

**Mr. Hennem:** In fact, we also have the numbers on what we actually achieve out there. On the class 2 highways which I just referred to, the actual average time to regain bare pavement is four hours, vis-à-vis the standards. So we are overachieving in this case. This is for the very reason that you're talking about. We are aware that the sooner we get the pavements bare, the safer the highway is. But we have to set priorities, because we can't cover the whole network instantly at the same time. So you will find in your area that one part of the highway will have a very short period, and then it takes time to drive to the other end of the network.

**Mr. Mauro:** With respect, though, in terms of setting priorities, each section of your highway system has contractors and/or publicly employed staff attached to it. That section is their priority, because that's their responsibility contractually. So there's no reason to suggest that that's an excuse for there to be a different standard in terms of the amount of hours that exist before it has to be bare pavement, right? That's their priority. That's their job.

Anyway, I don't want to beat that one up. I have a few other questions.

What criteria do you use to make your decisions around capital allocations for new construction?

**Mr. Rafi:** As we mentioned, we have in development—and hopefully we'll execute the entire asset management business framework, which is our business process where we'll look at the current asset valuation and the state of each segment. We're in the process of doing segment-by-segment assessments across each and every—

**Mr. Mauro:** I'm sorry. I didn't mean rehabbing or reconstructing existing infrastructure, I meant any increases to the capacity of the system—so new build.

**Mr. Rafi:** New build is, as I mentioned earlier, on our expansion priorities. We're looking at highway traffic in terms of volumes. We're looking at key economic corridors and access points to border entry areas. Those are all examined across the network to determine where best to apply expansion monies and where best to prioritize that in the context of how that will have the most economic benefit, the congestion relief benefit, in terms of access during critical periods in key areas of the province.

**Mr. Mauro:** The volumes and economic benefit are linked. So would it be fair to assume that the capital expansion projects are going to exist where the growth in the province exists?

**Mr. Rafi:** I would say that's certainly an important factor, but not only the factor.

**Mr. Mauro:** Beyond programs like SHIP and COMRIF, are there any long-standing perpetual agree-

ments with the feds around the maintenance or capital expansion works for the portion of the Trans-Canada highway that exists in Ontario?

**Mr. Rafi:** Yes, there are two other important partnerships we have. One is the border infrastructure fund, which is about expansion in critical areas as they come to key junctures in the border. Windsor is an excellent example of that, where we have, actually, as far back as Tilbury, going southwest toward Windsor—to expand the network there. The second one is the Canada strategic infrastructure fund, where we're looking at, again, strategic locations to apply for provincial projects for inspection.

**Mr. Mauro:** But the Trans-Canada Highway, is that completely within the purview of the province to maintain and expand and take care of, beyond the specific programs that come up once in a while?

**Mr. Rafi:** It is; however, Transport Canada has had a national highway system program in place for many years. So each province identifies its key corridors. In Ontario, it's beyond just the Trans-Canada; we look at other corridors as well, and they determine based on kilometre ranges as to what type of funding they provide to each province. I guess constitutionally, if that's part of your question, that responsibility rests with the province, but certainly there is an obligation, we feel, that the federal government has to assist Ontario in that regard.

**Mr. Mauro:** So historically there is no long-standing obligation on their part for the Trans-Canada Highway.

**Mr. Rafi:** Historically they have contributed to the building and development.

**Mr. Mauro:** Understood, but it's basically we joining with them on program and cost-sharing. Is that the case in other provinces? It's my understanding—and I'm looking for some clarification—that other provinces have different arrangements with the federal government when it comes to the Trans-Canada Highway, within different provincial boundaries. Would you know the answer to that?

**Mr. Hennem:** There are variations in federal investment in highway networks across Canada. You're quite correct.

**Mr. Mauro:** I don't mean investment in terms of programs that are developed. I mean investment in terms of historical agreements that exist between provinces and the federal government for the maintenance of the Trans-Canada Highway. Would you know?

**Mr. Rafi:** Maintenance? No, I don't believe that's the case. On expansion, we watch that pretty closely to ensure that Ontario gets what it should have in terms of the network.

**Mr. Mauro:** In the notes that we received there is some information here about the increase in costs associated with maintenance and capital works over the last number of years—six years, eight years, whatever the scope was; I forget. I was unclear when I read it as to what the link is for the increase in the costs. Are you drawing a conclusion and suggesting that the costs have increased when it comes to highway maintenance

because there has been privatization? Is it because there have been worse winters in the last six years or because we've done more work? What's the suggested reason for the increase in costs associated with the highway system?

**Mr. Rafi:** There are several changes that have taken place. For example, we have added approximately 11 different requirements for our contractors to provide. In this current round of contractor outsourcing in our RFP processes, we have seen a reduction in our costs but added these 11 elements, not the least of which is the need to apply West Nile virus to still water/stagnant water areas throughout our network, which is a huge concern for us—enhanced emergency response methods.

In addition to that, the highway network has increased in terms of lane kilometres. There has been expansion, there have been additional lanes, so there are additional costs associated with that. But we have actually received the benefit of that through our competitive tendering process. In addition to that, we have forgone capital expenditures that we would have undertaken—approximately \$7 million per year in equipment—because those costs are being passed along.

**Mr. Mauro:** So you would suggest it's cheaper now to provide the same level of care than it was prior to privatization. Is that what you're saying?

**Mr. Rafi:** Yes, and this is, I think, a controversial issue. It was discussed and debated in 1999 with Mr. McCarter's predecessor. Our view is, we are getting more value for the money we spend now than we did in previous years. If one just applied CPI inflation from 1999 forward, year over year, to 2003-04, you'd have to add \$23 million alone just for keeping pace with inflation on that. So we feel we've done very well.

**Mr. Mauro:** My last comment is that others have spoken about quantifying and checking up on the people who are responsible for doing the work, the management within MTO. I can tell you from personal experience that, as Ms. Sandals said earlier, when you're travelling sections of northern highway, you can tell where one contractor stops and another one begins. The distinction between the quality of the work is that stark and it's extremely dangerous for a lot of folks. I'm hopeful that what's been raised in this audit is going to be acted on by your ministry and there are going to be products and mechanisms in place to address contractors who are not doing the work that they're supposed to do.

1040

**The Chair:** I wanted to ask a couple of supplementary questions with regard to what Mr. Mauro brought up, and that is, the federal contribution toward our new highway system and that kind of thing.

I wonder, Deputy, if you would provide the committee with figures on their contribution toward our new capital construction over the past 10, maybe even 20, years with regard to our highway system.

I'd also like it if you could provide the committee with the percentage share that Ontario is getting from the Canada-provincial construction—I forget the name. I understand it's about 25%, whereas we have about 38%

of the population. Again, we're not getting our fair share. I said that when I was transportation minister and I continue to support the present government's position in getting a fair share of programs as we go forward. I think you left the impression that we were getting our fair share under that agreement and that there weren't other programs in other provinces.

When we were in Fredericton this summer, I met in New Brunswick by happenstance with some Ontario contractors who were bidding on four-laning the Trans-Canada Highway from Edmundston down to Fredericton. I'm aware that there were great gobs of federal money going into that four-laning project, both past and into the future.

I think it's important that we keep our eyes on that. When I was the minister, the federal government gave \$6 million out of \$1 billion of construction to the province of Ontario, whereas they were pouring huge amounts of money into other provinces across this country. For us to call the Trans-Canada Highway the Trans-Canada Highway when the province of Ontario is spending all the money on it, I just don't think is fair. I think the people out there have the idea that the federal government is coming to the table with regard to building the Trans-Canada Highway. They have in the long-term past, but they sure weren't doing anything when we four-laned the 417 from Ottawa out to Arnprior, for instance, which was a significant project. Carl, I don't know the total number on that, but it was well over \$100 million. They may have come to the table very late, in the last phases of it, but for that kind of a project, for instance, not only are they not giving money for the north, they're not giving money anywhere on the Trans-Canada Highway.

It's important for us to keep these numbers out there so that people understand that we aren't getting our fair share, not only with regard to other programs, but also in terms of construction.

**Mrs. Sandals:** Norm, may I bail in?

Having been on the same trip to Fredericton, I concur with Norm totally. When you're flying into the airport, you seem to follow along the same path as the Trans-Canada. I actually noted that that highway is four-laned through the middle of nowhere, and it would be interesting to know how this got paid for. I suspect you're right, that the federal government four-laned it through a vast expanse of bush. So I concur with your observations totally.

**The Chair:** I think it's really important in this debate that we are now having in Canada and in Ontario that we've got to demand of the federal government that they step up to the table.

**Mr. Rafi:** If you'll allow us, we will get that information after today. We don't have the federal contributions over the last 20 years here, and the percentage share for Ontario for the various programs, not just the Canada strategic infrastructure but the border infrastructure, the strategic highway infrastructure.

But I would like to be clear on the record that if I did say that, then I misspoke myself. I didn't mean to suggest

that Ontario feels—or I feel, for that matter—that we have received the adequate amount of funding that we should get based on highway kilometres, based on percentage use, based on economic activity. By no stretch is that the case, in my opinion and, I dare say, in my colleagues' across all sectors that Ontario interacts with the federal government.

My reference to the federal government's role in maintenance, I believe it was—it is my understanding that they do not provide any maintenance activity in any region of the country. As far as the New Brunswick example goes, it's a lovely highway for a very concentrated number of individuals to travel, and I would only echo and agree with, I think, probably all members that Ontario could do a lot better from the federal government in that regard. So I just want to be certain that my comments were reflected appropriately, that I didn't misspeak myself.

**The Chair:** I think the area where confusion may have arisen was when Mr. Mauro was asking you about the Trans-Canada Highway. They have contributed in the past to the Trans-Canada, but it's a distant past.

**Mr. Rafi:** Oh, yes, original build.

**The Chair:** In terms of the total costs associated with it, it's becoming a smaller and smaller percentage as we go forward in the history, as we improve the Trans-Canada Highway in different sections. They're not contributing, or weren't contributing, to the four-laning of Highway 69 up to Sudbury. I think they may have kicked in more recently on that one. In my view, you can't present these figures and say they're giving \$50 million when we're talking billions of dollars. It's a very, very small percentage of the total.

**Mr. Rafi:** I think we have a strong reputation in Ottawa for our concerns in that regard.

**Mrs. Munro:** I wanted to ask a couple of questions, and you may appreciate my interest in asking.

With regard to the issue of gross vehicle weight of trucks, in the auditor's report he refers to the fact that it is estimated that there is, he suggests, \$300 million of avoidable damage. Obviously, I know about the phasing in of the vehicle weight and dimension project, but I wondered if at this point you are able to give us a sense of the effectiveness of those initial phases 1 and 2 in terms of being able to suggest that it is having a beneficial impact on those kinds of costs.

**Mr. Rafi:** The ability to ultimately declare victory on the \$300 million will really be a function of the industry's migration to new equipment and what we're calling the safe, productive and infrastructure-friendly equipment that they will be obliged to have on Ontario roads. In some cases, that may take 10 to 15 years as they phase out and grandfather existing production and equipment and as they build new equipment or equip their trucks with active axles, as opposed to fixed or liftable axles. From your experience, you know probably more about that than I do. So, to be perfectly up front about it, it won't be until the end of the fourth phase of our

vehicle weights and dimensions project. We are executing the third phase this year.

To give you an example, the number of lift-axles-equipped vehicles in each project phase—in the third phase it will be about 19,500 trailers. This is the most heavily populated stage, if I can call it that, and then that drops to 10,000 trucks in phase 4. We're very confident that by the end of phase 4, we will have achieved a significant reduction in degradation and impact on the infrastructure, not just provincially but municipally as well, because the radius turns in municipal streets and arterial roads really take the lion's share of that damage.

**1050**

**Mrs. Munro:** My second question has to do with a related topic, in that there are some issues raised around the bridges in the province. I wondered if you could tell us, what is the lifespan of a bridge?

**Mr. Rafi:** I'll let the most experienced transportation engineer in Ontario address that.

**Mr. Hennum:** The—

**The Chair:** Could I just interrupt here? Mr. Hennum, since I left the ministry, have you now become the chief engineer?

**Mr. Hennum:** I never made that claim, at least not when you were there.

Probably about 60 to 70 years is the average lifespan, but that means you have to look after it in the meantime, of course. There is constant rehabilitation and maintenance that is required to achieve that kind of lifespan, but that's in general. I have to preface that; it depends on the type of bridge, because we are using all kinds of bridge material these days. We have just received awards actually for using timber structures in northern Ontario in quite innovative ways, which both reduces costs and fits well into the environment in which they are built.

**Mrs. Munro:** That was really why I wanted to ask the question, simply because of the complexity. Obviously there's going to be a huge variation in terms of what is an average bridge lifespan. The challenge of rehabilitation is one the auditor identified. I think we have numbers here that refer to the number of bridges that are provincial bridges and the number that are municipal bridges. I wondered if you could just comment briefly on the possible role of the ministry in terms of the oversight of this rehabilitation process.

**Mr. Rafi:** In terms of bridge management and any necessary maintenance or rehabilitation, as I think the auditor pointed out, as you suggest—I guess our bridge management system contains a high degree of complete and accurate information, but he has made some suggestions about notification flags in terms of inspection cycles. We're certainly going to execute that.

As referenced in my remarks, the bridge management system we have in place is actually a fairly sophisticated and effective model that's being deployed and used by other jurisdictions in the country. As well, we have undertaken some changes to make sure we do have more complete and accurate bridge condition information in place, and that is the requirement to inspect every two

years. The data is then loaded on an annual basis into the system so it can be effectively used. Obviously, experienced professional engineers are doing the inspections.

We have updated our inspection manual and the structural manual and we've added training and refresher courses for staff. But we've also applied the bridge management system and given it to the Ontario Good Roads Association so they can educate municipalities and use this bridge management system for their own maintenance inspection requirements, both legislatively and in a responsible manner, for all bridges and roads that they have control over as well.

**The Chair:** Mr. Prue, do you have some questions?

**Mr. Prue:** Yes, I have two separate questions. The first one relates to new construction maintenance, new construction materials. I was heartened over the last number of years to see that, instead of using aggregates, digging up more hills and vales in Ontario and putting more stuff in the dumps, you're starting to use old tires, glass, old concrete in the roads. How much of that is being used, or how much are you relying on the old materials?

**Mr. Hennem:** I do not have the actual quantities available for you—I can provide you with that if you're interested—but it's a fairly moderate amount at this stage of the game. We use it basically in side-slope fills and that sort of thing. I will be able to provide you the quantities, if you wish.

**Mr. Prue:** Is it environmentally possible that instead of putting glass in landfills it could all be used on road construction?

**Mr. Hennem:** It has the potential for it, yes.

**Mr. Prue:** Is it possible that, instead of having huge tire dumps like the one that was on fire for years in Hamilton, the tires could be ground up and used in road construction? And, if all that's possible, why aren't we doing it?

**Mr. Hennem:** I think the jury is still out on whether that is a good idea or not. It depends, again, on the quantities, of course. For example, what do you do when you rehabilitate, have to reconstruct or you have a whole bunch of rubber that you have to dispose of in some way? It depends on the types of roads as well, of course. Some municipalities have used it quite a bit on lower-volume roads. We have not used rubber in the pavements to any great extent, but we have used it in the fills outside the pavement platform.

**Mr. Prue:** I noticed, and I thought it was really amazing, that when they tore down old Terminal 1 at Toronto airport they used all of the old concrete. They never took any of it away. They used it in the construction of the new building. Can we do the same kind of thing with our old concrete in our roads or our bridges or anything else?

**Mr. Hennem:** We do crush it and use it for certain purposes. We don't have, quite frankly, that many concrete roads. We haven't built concrete roads for quite some time. It's just starting to be incorporated into our tenders right now. There aren't the huge quantities, and

we do try to use it wherever we can. Certainly, our objective is to recycle as much as possible what we have in the right-of-way. That's an objective, and a very commendable objective as well, I think.

**Mr. Prue:** My second related question: There is an enforcement program—congratulations on that—for going after trucks and trailers that are overloaded, because we know that that causes tremendous damage to the roads in Ontario. They overload them; it causes stress on the roads; they break down faster. So we go out and enforce that. But the auditor has noted that you do not collect or analyze any of the data on how many convictions are made. Why don't you do that—how much money, why the convictions are made? Why don't you do that?

**Mr. Rafi:** Actually, I wouldn't say we don't analyze the data; in fact, we have a commercial vehicle operator record that is for carriers—in other words, the companies themselves—and for drivers. There is a system of points applied. All charges are instituted on that system. Then, when you hit a certain threshold, through a stepped escalation process ultimately you can be taken out of business for too many collisions or weight violations, either moving or non-moving. We also have the most stringent requirements, certainly in Canada, and one of the more stringent requirements in North America, for both weight and moving violations on our carriers.

To your specific question, we have recently instituted what we call roadside data capture, an electronic system we'll be implementing this summer that will give a better monitoring and removal of high-risk offenders, by knowing that if you're overloaded in Cornwall and one of our enforcement officers stops you, that's real-time information to the officer in London as you come through that area as well. So we can flag individual vehicles to make sure that we're doing it in a more effective manner than hoping that we get them into the scale at the right time when they are overloaded. That's one area.

#### 1100

The second area is that we're working with the actual shippers and the aggregate companies that actually load these trucks. It's always a challenge for the driver, because the impact on the driver is that they'll get somebody else to haul the goods. We're trying to work with that industry by doing spot audits and ensuring that when they're loading vehicles and they're giving them the load tickets, those vehicles are leaving their areas properly loaded so they're not damaging the infrastructure. So I think we're undertaking a few tools that are available to us and using the court system, which we can't control, in the best manner possible.

**Mr. Prue:** We need higher fines.

**Mr. Rafi:** I'm not sure that just increasing the fines is the best deterrent, in my experience. I think that the appropriate use of fines and education will be there. Courts sometimes are reluctant to apply certain liability charges unless and until there is strict proof. So absolute versus strict liability offences, meaning that if something happens you're simply convicted and you pay a fine or worse, are very difficult for courts to accept. We've had

some success, and I dare say the only jurisdiction in Canada that has had success with absolute liability is Ontario. So it's not just one instrument; it's a series of things that we've applied.

**Mr. Prue:** Ontario is now a North American leader in car production. It seems to be that the cars keep getting bigger and bigger. I see these Escalades and other huge, huge tanks on the road, like Hummers. Should Ontario be doing something about reducing the weight and size of the cars in order to assist our road maintenance? They have to be more harmful to the roads than small vehicles; they have to be.

**Mr. Rafi:** I don't have the technical specifications on that. It may sound like I'm passing this off to the federal government, but it is in their purview to determine the various dimensions, sizes and safety aspects of vehicles in Canada.

**Mr. Prue:** What effect are studded tires going to have on northern Ontario? That has been discussed in the Legislature this last couple of weeks. What effect is allowing studded tires in northern Ontario going to have on road maintenance across half of Ontario?

**Mr. Rafi:** I think it's far too early to be able to comment on that. We've just allowed for the institution of studded tires and a certain type of stud in specific locations in the north, as you identify. We've looked at this from a road safety point of view as well. Our hope is that it will bring additional safety, especially in wet ice conditions, which are certainly more prevalent in the north than they are in the southern parts of Ontario.

**Mr. Prue:** It's going to help in terms of safety, and no one will deny that. But in terms of maintenance, if it starts tearing up the roads and costing tens of millions of dollars in resurfacing—are you going to be monitoring this?

**Mr. Rafi:** Absolutely, yes, we're going to be monitoring. But it's purely speculative to put a figure on that or to even assume that it will have a deleterious impact on maintenance. It's too early for us to be able to say that. But we will be monitoring it.

**Mr. Lalonde:** Just to carry on with the question that was brought forward by Mr. Mauro, in the auditor's report on page 335, we have a table, "Highway Maintenance Expenditures." We know that we have privatized a lot of those maintenance contracts. What is the percentage of the maintenance contracts that have been privatized? Do we have the percentage?

**Mr. Hennem:** We're 100% outsourced in maintenance. All the work is done by contractors, for all intents and purposes.

**Mr. Lalonde:** That resulted in how much staff reduction? Approximately how many fewer staff do we have?

**Mr. Hennem:** We currently have about 800 maintenance staff, compared with about 2,400 before, so it's down to about a third.

**Mr. Lalonde:** About 1,200 less? When I'm looking at this, way back in 1996-97, we had 56,000 lane kilometres and now we're down to 46,000. The cost per kilometre for maintenance was \$3,900 and now it's up to \$5,300.

Why is there a higher cost per kilometre at the present time?

**Mr. Hennem:** A couple of things contribute to that. First of all, we had a bigger network before, as you pointed out, but we have retained all the high-cost highways, so the average cost per kilometre will go up. But the main reason is reflected in the total highway cost numbers, higher up in your table there, which the deputy minister addressed a little earlier, indicating that there is inflation in those figures. They also reflect a number of additions that we have made to how we do maintenance, such as technology in a number of areas and incorporating new regulations for traffic control when they do work on the highways, for example. If you add all those additions up, you will probably reach around \$20 million on an annual basis for all costs for operating and maintaining these new methods. Overall, you have inflation and you have enhancements to the way we are doing our business.

**Mr. Lalonde:** In other words, it has been a cost saving to the taxpayers, having awarded the maintenance contract to the private sector. It is a cost saving. Thank you. That answers the question.

**The Chair:** For Hansard's sake, you said yes.

**Mr. Hennem:** We believe that is the case. We know that is the case.

**The Chair:** Could I ask some questions with regard to municipal bridges? The auditor talked about ensuring that municipalities were in fact undertaking inspections and that you were implementing a system to ensure that municipalities were undertaking these inspections. Is that correct? I believe those were in your opening remarks.

**Mr. Rafi:** Yes, you are correct. The auditor does say that we should obtain adequate assurance that local governments have appropriate systems and procedures in place.

**The Chair:** As I also understand from your remarks and from what the auditor said, you bear no responsibility in terms of ensuring that a municipal bridge is up to standard at this time. I'm hesitant in terms of leaving the issue up in the air as to whose responsibility the bridge is, and the safety of the bridge. In my understanding, it's a municipality's responsibility to ensure that the bridge is safe to go over.

**Mr. Rafi:** In fact, under legislation, that is their responsibility, and always has been.

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**The Chair:** OK. So then do you divide the responsibility between the ministry, the government of Ontario and the municipality if a municipal bridge falls down and there is injury or harm or whatever? How are we going to ensure that doesn't happen without taking the full responsibility of control of the bridge?

**Mr. Rafi:** We feel we've done several recent important measures, not the least of which is the bridge management system and the Ontario structure inspection manual. We've provided both the system and the manual both through education and free of charge to municipalities for them to use, because varying municipalities with

varying sizes may not be able to afford the technology that helps them to inspect and monitor bridges and keep their inventory updated and current.

In addition to that, the OSTAR fund that you would be familiar with, as well as the most recent COMRIF fund, provide for municipal monies through application by municipalities for bridge maintenance, road maintenance and road enhancements. These are municipalities that are much smaller and perhaps wouldn't have the resources themselves, or if they did, they would have to take several years to build those resources in their reserves.

Lastly, our work with the Ontario Good Roads Association, which represents over 90% of the municipalities, has transmitted this information across all municipalities that are interested. In the COMRIF round of applications, I can tell you that over 67% of the municipalities that applied had some form of bridge inspection and asset management plans already in place, and COMRIF can help to supplement and improve on those.

We've also tried to pressure and work with the federal government to ensure that a portion of those COMRIF program funds are allocated to the development of asset management capacity in municipalities. So we haven't said, "That's your legislative responsibility," and turned our backs or walked away from them whatsoever. In fact, given our leadership role in the country, we've worked with municipalities and will continue to do so. We take that responsibility seriously.

**The Chair:** I guess my real concern here is how we're going to help municipalities fix the problem. We've talked about the downloading of some of our provincial highways, but they basically landed on county government shoulders, and county governments are better able to meet the challenge perhaps than the lower-tier municipalities.

Some of the lower-tier municipalities have minimal taxing power. I think Lanark Highlands, which I represent, has 45 bridges or something like that in this lower-tier municipality. Many of the roads aren't paved. They still have crown land in their municipality. Notwithstanding that we may get a report that they have inspected or not inspected, from what I'm hearing, you're not looking at the inspection report; you're just asking them if they've inspected. Is that correct?

**Mr. Rafi:** No, we're giving them the tools actually to ensure that they can inspect, that they have an asset management plan. In fact, at the county level in Lanark, I'm pleased to say that they do have an asset management plan in place that monitors their bridge and road network so they can do what we're trying to do, which is to do early rehabilitation and maintenance so that their costs don't balloon later on. We have taken several tools to help them in that regard.

**The Chair:** County is one thing and the local municipality is another. It's mentioned your assessment is the BCI. You use an assessment—

**Mr. Rafi:** Bridge condition index.

**The Chair:** Yes. Are the municipalities and the counties doing that as well?

**Mr. Rafi:** Some are, very much so. As you mentioned, the larger ones that have a very sophisticated approach, or a relatively sophisticated approach, will probably be applying that. Others are using perhaps more basic asset management tools. As they improve and get more comfortable with the bridge management system, they too will be able to apply those indices as necessary.

**The Chair:** The ministry had a bridge over the Montreal River. I don't know whether it totally collapsed or partially collapsed, actually. Notwithstanding the welfare or the taxing power and the budget of MTO, that was very much a latent defect that probably would not have been revealed on an inspection. But we've got many thousands of bridges that are the responsibility of counties and municipalities. At some point in time the province, or the province and the feds, is going to have to jump in and deal with this particular problem. I just wonder whether or not we should be, at this time, trying to establish where the priorities are going to be when we jump in.

For instance, in the county of Renfrew they have a bridge that, as I understand it, should be replaced in the not-too-distant future. In order for them to do that, it's going to take up a huge amount of the county's budget. Well, they're not going to be able to do that, so senior governments are going to have to come to their rescue.

Should we not, at this point in time, be trying to manage into the future and say to local governments, to county governments, "You should be on this BCI model, and here's some money to help you do it"?

**Mr. Rafi:** With respect, I think that's exactly what we are doing. Not only have we alleviated their need to spend on developing their own technology so they have the technology that allows them to apply that indice to their bridge structures, but we've provided funding, through OSTAR previously and currently COMRIF, so that when they prioritize that a particular bridge needs or bridges need rehabilitation, they make that application to those funds. Of the 350 applications that have been received this year, 62 are for bridge projects, and they are the priorities of that community, as distinct from perhaps a road priority, as distinct from perhaps some other infrastructure priority.

I think both the federal and Ontario governments, and especially the Ontario government, are trying to provide that assistance in both expertise and technology, which equals money, and in funds themselves to help those critical infrastructures.

**Mr. Zimmer:** Returning to a favourite topic of mine, and that's information technology and computer systems and so on: Over the last year and a half that I've been on this committee, various ministries have come forward, and one of the ongoing themes is the difficulty of incorporating new technology and getting new technology set up—the computer systems, and everybody speaking to everybody electronically and that sort of thing. We've heard stories ranging from horror to the comical about how information management systems have tripped up the best intentions and the best plans.

I take it, with your new asset management program, that a component of it is the latest information technology. How confident are you that you'll meet the challenges of getting the right information systems in place and getting it all talking to whom it should be talking to and so on? We've heard, as I've said, horror stories and comical stories on how the best-laid plans of folks have gone wrong in this regard.

**Mr. Rafi:** As you've alluded to, the success of any execution of information technology is not just the purchasing of the technology but it's actually the business process changes that go with effective implementation, so that you can both change the way you do business to harness the benefits of technology and then also apply that to make smarter, more informed and more effective decisions.

We can say with great confidence that we're going to have success, because we've pilot-tested this technology in our vehicles, the electronic diaries, the automatic vehicle locations systems. It's Internet-based now. Our supervisory and management staff have the ability to go to our Web site and an Internet site to determine and find out in real time where trucks are on the network. We're testing that in eastern region and are deploying that. We're deploying touch-screen technology in our vehicles so they can take, as the auditor quite rightly identified, electronic diaries so that you don't have these manual reports used in the past, because you can't then deploy that information and look for trends and look for analysis—to your point about management information and effective decisions. So we've done it incrementally

because we wanted to get it right, and I think we're on that path.

**Mr. Zimmer:** To the extent that a lot of this work is contracted out, what's the plan for getting the folks it's contracted out to plugged into the technology systems?

**Mr. Hennum:** We already have provisions in the contracts for this to take place. They sign off on that when they actually accept the assignments. Of course, some of these things are not yet fully developed, but indeed the contracts allow for us to introduce this into their operations as well. So we have looked a little bit forward to make sure we don't get locked out in that respect.

**Mr. Zimmer:** I wish you the best of luck, and I look forward to the conversation next year on how the management information technology systems panned out.

**The Chair:** Do we have any other questions?

**Mrs. Munro:** Actually, it's not a question. I just wanted to comment that Mr. Prue asked about the question of sanctions for the overweight and things like that, and simply put on the record that in my experience the individual truckers have extreme respect for the authority and the expertise of the people who manage the weigh stations.

**The Chair:** Thank you very much. We appreciate your coming here. Your clarity and directness have resulted in yours being the briefest questioning session so far this year. When we call you back next year, I hope it's even briefer. That's not a promise.

**Mr. Rafi:** So do we, Chair. Thank you for your time.

*The committee adjourned at 1123.*





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