

Highway Maintenance Contracts

Transportation and
Economic Corridors

Report of the Auditor General
November 2024



**Auditor
General**
OF ALBERTA

Shane Getson, MLA
Chair
Standing Committee on Legislative Offices

I am honoured to transmit my *Highway Maintenance Contracts* to the Members of the Legislative Assembly of Alberta, under the *Auditor General Act*.



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Auditor General of Alberta

Edmonton, Alberta
November 2024

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Related Reports:

- There are no related reports

Appointed under Alberta's *Auditor General Act*, the Auditor General is the legislated auditor of the *Consolidated Financial Statements of the Province of Alberta* and most provincial agencies, boards, commissions, and regulated funds. The audits conducted by the Office of the Auditor General report on how government is managing its responsibilities and the province's resources. Through our audit reports, we provide independent assurance to the 87 Members of the Legislative Assembly of Alberta, and the people of Alberta, that public money is properly accounted for and provides value.

Report Highlights

Why We Did This Audit

Each year, the Department of Transportation and Economic Corridors (the department) spends over \$320 million to keep its highways safe and in good driving condition. The department contracts highway maintenance to third-party contractors and oversees results.

What We Looked At

Our audit objective was to assess if the department has effective processes to monitor the performance of its highway maintenance contractors and choose the right type of contract for the work.



We Found:

The department:

- does not have evidence or adequate reporting from the contractor to demonstrate how all contract requirements are being met
- does not always reduce payment for materials that do not meet specifications
- does not always comply with its sole-sourcing policy when it gives extra work to contractors
- lacks controls for pricing and approving all extra work



We Recommend

We recommend the department improve:

- monitoring processes to ensure contractors meet requirements
- guidance and processes to administer extra work

Conclusion

We conclude, based on our audit criteria, that the department has processes to ensure it monitors the performance of its highway maintenance contractors and supports the contract structure but not all of these processes are effective, and the department can improve them.

Why our Findings Matter to Albertans

The department spends a lot of money to maintain its highways. It needs effective systems to ensure contractors do the work they are getting paid for and any extra work it gives the contractors follows its procurement policies.

Background

The department manages over 64,000 lane-kilometres¹ of highways throughout Alberta. It contracts out highway maintenance for over \$320 million per year and oversees the results.

What is highway maintenance in Alberta?

Highway maintenance includes a wide range of both winter and summer activities, such as:²

Alberta’s history of highway maintenance delivery

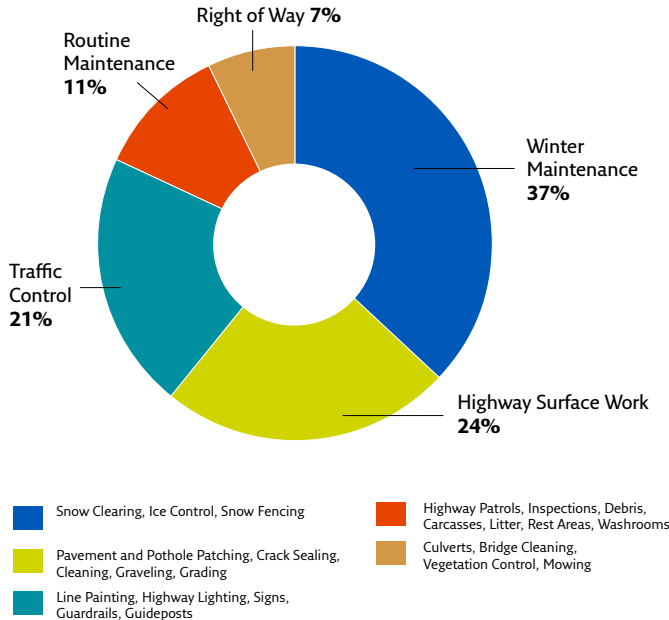
About 30 years ago the department started outsourcing highway maintenance to contractors. It signed long-term contracts (legacy contracts) throughout the province. It used the same type of contract until 2019, when it:

- introduced performance-based contracts
- reduced the scope of contracts by limiting the number of maintenance areas that any single contractor could hold, resulting in less reliance on any one contractor

Legacy contracts were unit-rate and prescriptive

The department’s legacy contracts were mainly unit-rate—they listed all the activities contractors had to complete, how they had to do the work, and the price they were paid for each activity they completed.

Composition of Contracts by Activity



Highway maintenance does not include any major rehabilitation, repair or construction of roads, highways, or related infrastructure.

¹ A lane-kilometre is a single lane kilometre-long segment of roadway.
² Composition of contracts by activity taken from the seven contracts that take effect in 2024.

Hybrid contracts were introduced in 2019

In 2017, because eight of the 11 legacy contracts were expiring in 2019, the department hired a third-party consultant to assess the viability of moving to performance-based contracts. The consultant showed that moving them was viable, but there was no clear best option.

When the eight legacy contracts expired in 2019, the department replaced them with hybrid contracts that used performance-based delivery for some activities.

Performance-based delivery is more results-oriented and less prescriptive—it specifies performance measures that contractors must meet and report back on. The department pays a fixed monthly fee, with bonuses and penalties based on contractor performance. It continues to use hybrid contracts for the seven new contracts it signed in 2024.³

The department now has 18 contracts with private companies, costing over \$320 million a year. It relies on both central highway operations and regional staff to:

- decide on the type and content of contracts, including specifications for activities
- ensure contractors comply with their contracts

The department follows a procurement accountability framework in administering its contracts. It also developed a Contract Administration Manual (CAM) with guidance on roles, responsibilities, and oversight of highway maintenance contracts.

³ Seven contracts take effect August 1, 2024. The expected cost of them is \$100 million per year.

Detailed Findings and Recommendations

Monitoring Contractor Performance

Context

Monitoring processes depend on the type of contract

In a unit-rate contract, the department initiates, monitors, and inspects the contractor's work before paying for it. For example, when winter maintenance is based on unit-rate, prices for activities like snow clearing are set in the contract and the department orders the work as needed.

A performance-based contract is more results oriented. It sets service levels⁴ for each performance-based activity. The department pays the contractor a fixed monthly fee to do the work, and the contractor must meet the service levels or face penalties. For example, when winter maintenance is performance-based, the contract states snow must be cleared off highways⁵ within a set time. The contractor must monitor the weather and do the work, and it receives a fixed monthly fee regardless of how much it snows.

The department requires contractors to have two divisions for performance-based work—an operations group that does the work, and an audit division—independent of the operations group—that audits their work. The department decides what work is audited each month, and the contractor reports the results.

The department receives two types of reporting each month:

- Work the operations division did—the department must review this reporting each month to verify that the work done meets service levels in the contract
- An assessment by the contractor's audit division on the results of their audit work—the department must review this reporting each month to verify its accuracy and learn of any non-compliant work by the contractor

Both types of reporting allow the department to adjust payments to the contractor's fixed monthly fees, and to monitor where contractor work is non-compliant to ensure it is corrected. Contractors face steeper penalties for recurring non-compliances.

The following illustration shows the differences in the department's monitoring processes between unit-rate and performance-based contracts:



Unit-rate Structure

Contract states unit rates for each activity

Department issues work orders for a set quantity of each activity

Contractor completes the work and invoices the department

Department reviews invoicing and inspects the work before paying for it

Performance-based Structure

Contract states required service levels for each activity

Department pays a fixed monthly fee and contractor completes the work at their own discretion

Contractor's audit division assesses the work

Contractor provides monthly reporting to the department on the work done and the audit results

Department determines pay adjustments and further actions on non-compliant work

⁴ These service levels are called Operational Performance Measures in the contracts.

⁵ The contracts define various classes of highway, and accumulation triggers and times to respond vary for each class.

Monitoring public feedback

The department can use public feedback to help assess contractor performance and identify when and where maintenance work is needed. The public can contact:

- the contractor, who then reports it to the department
- regional staff, by phone or email
- Alberta 511, which is redirected to the department
- the minister's office or a Member of the Legislative Assembly, which is then documented as an action request

Performance-based contracts require contractors to report monthly on how they respond to public complaints.

Materials testing

Contracts specify the composition of materials like sand and salt for ice control, patch materials for highway surfacing, and paint for line painting. The department relies on quality control testing to ensure these specifications are met. Contracts for materials like salt that does not meet specifications have a payment adjustment schedule.

Criteria

The department should:

- monitor and evaluate contractor performance through inspection or reporting to support payment for work done
- complete ongoing cost-benefit analysis of the contract delivery structure

Key findings

The department:

- receives monthly reporting from the contractors, but this reporting does not always demonstrate how contract requirements are being met for performance-based activities
- lacks documented evidence that all unit-rate work meets specifications
- does not always reduce payment for materials that do not meet specifications
- does not always use public feedback to monitor contractor performance

Our findings

Contractor reporting does not always demonstrate how they meet requirements

For performance-based activities, the department relies on reporting from contractors to demonstrate how they meet service levels. Based on our review, this reporting did not always demonstrate how contract requirements were met.

For example, we looked at snow clearing both during and after winter events,⁶ where for each event, the contractor's operations team must report accumulation readings and its audit division must audit a sample of highways to ensure the work is being done.

We found:

- for a winter event lasting nine hours, the contractor reported only one accumulation reading two hours before the snowfall ended, and the contractor's audit division did not audit all the service levels that it was supposed to
- for another winter event lasting 21 hours, the audit division assessed compliance for only about 25 minutes, 12 hours after the event started

⁶ A winter event is defined in the contracts as the time from when snow begins to accumulate on highways, frost creates slippery conditions, or when freezing rain is evident anywhere on the highway to when snow or freezing rain stops falling or accumulating or when frost no longer creates slippery conditions.

Both these examples show the contractor did not report enough information to demonstrate how it was meeting winter service levels, and the department did not identify the deficiencies. Nor did the department receive any other reporting to demonstrate how the contractor met compliance measures. The department pays over \$7 million per year to this contractor for winter maintenance.

The department's processes to review monthly reporting are inconsistent

Our testing of the two contracts with performance-based delivery found that the regions have inconsistent processes to review monthly reporting from the contractors, including what they review and whether the regions were identifying issues with monthly reporting.

For example, even though the contracts define who is responsible—the department or the contractor—for assessing compliance with each service level:

- for one contract, department staff relied on the contractor's audit division to assess compliance that the department was supposed to assess. This lasted for just over four years from the start of the contract before the department achieved clarification on the responsibilities with the contractor.
- for the other contract, department staff used the contractor's audit division to assess compliance for all service levels in the contract, even though the contract required the department to assess compliance for two thirds of the service levels. The department does not always receive the monthly audit results from the contractor's audit division to review for accuracy.

The department's contract administration manual is out of date

The department last updated the CAM in 2010, nine years before it started using performance-based work in 2019. Although the department provided training on performance-based work, regions are inconsistent in how they administer it. For example, the department charges penalties to contractors for non-compliant work, and these penalties can increase if non-compliance recurs.

Regional staff do not have adequate guidance on what recurring non-compliance is—it could be a deficiency:

- that was not fixed so it persists the following month
- related to the same activity month after month, regardless of location

The only way to identify persistent deficiencies would be to re-audit all deficiencies, which the department is not doing.

The department lacks documented evidence that all unit-rate work meets specifications

In 20 of 23 work orders where the department paid \$15.5 million for unit-rate work including snow clearing, grading, line painting, and surface patching, it did not have adequate evidence that all the work met contract specifications. Department regional staff must inspect completed work before paying for it. In all 20 cases, staff said they visually inspected the work but did not document results.

The CAM says the department should inspect contractor work and document inspection results.⁷ But the CAM lacks guidance on when and how staff should complete and document inspections.

⁷ CAM section 1.4.5 Due Diligence.

The department does not always reduce payment for materials that do not meet specifications

The composition of salt is tested at the manufacturer. This salt is then picked up by contractors and used on the highways for ice control. We examined eight work orders where contractors billed the department \$2.1 million for materials such as salt for ice control and paint used in line painting. The work orders for salt and ice control did not have enough information from the contractors to demonstrate if the salt passed or failed the quality control test.

As a result, although the contracts have payment adjustment schedules for salt that does not meet the department's specifications, the department does not apply payment adjustments. For six of eight work orders we tested for \$1.3 million of salt and ice control materials, the department could not tell if any of the materials passed or failed the quality control test and it made no payment adjustments.

The department does not always use public feedback to monitor contractor performance

Regional staff said they receive public feedback on contractor performance, but they don't always document or track it. So we could not see the feedback or what the department did to investigate concerns.

For performance-based contracts, we reviewed contractor reporting on actions they took in response to complaints. This reporting showed how contractors responded to problems, their response times, and whether they solved problems. But for legacy contracts, where contractors must log public complaints, regional staff did not provide evidence of the logs—they do not request the logs from the contractor or review complaints or responses.

The department used lessons learned to modify its 2024 contracts

The department signed seven new contracts in 2024. It had a process to track lessons learned from the 2019 contracts and based on these lessons, it updated specifications and service levels in its 2024 contracts.

NEW Recommendation: Ensure contractors meet their requirements

We recommend that the Department of Transportation and Economic Corridors improve its monitoring processes to ensure contractors meet requirements.

CONSEQUENCES OF NOT TAKING ACTION

The department cannot demonstrate that, or know if, it got what it paid for unless it knows the results of contractors' work. It may rely too much on contractors to verify that they complete their work appropriately.

Administering Extra Work

Context

Highway maintenance contracts let the department award extra work to contractors. Extra work includes work not specified or defined as a maintenance activity in the contract.

Essentially, regional staff may issue work orders for a contractor to complete work beyond the contract. The department does not set up new contracts for this extra work, nor does it publicly tender. Contracts do not set a maximum dollar amount that can be extra work.

The CAM provides guidance on how to initiate and oversee extra work. This includes how to determine the scope of work, obtain proper approvals for amounts spent, price the work, and oversee and review the completed work before paying.

From fiscal 2021 to 2023,⁸ the department paid an average of \$54 million per year to highway maintenance contractors for extra work. For example, we identified unplanned culvert repair, paving, and surface patching work that was administered as extra work.

⁸ April 1, 2020 to March 31, 2023.

Criteria

The department should monitor and evaluate contractor performance through inspection and reporting to support its payment for work done.

Key findings

The department:

- does not always comply with its sole-sourcing policy when it provides extra work to contractors
- lacks controls for pricing and approving all extra work

Our findings

The department does not always comply with its sole-sourcing policy

We examined 10 work orders from three contracts for nearly \$14 million of extra work. In four cases, the department did not document why it treated the work as extra instead of tendering a new contract for it.

The CAM has guidance on administering extra work, but not on whether to give the work to the existing contractor or seek bids for it. The CAM states that extra work is generally a valid option in any of the following cases:

- small volume, under a few thousand dollars
- a one-time project not expected to recur over the contract term
- cases that are difficult or problematic to define scope for

These broad guidelines don't say what rationale or support the department should keep when awarding extra work.

The sole-sourcing policy requires construction services of \$100,000 or more to be competitively bid unless there is a valid trade exception.⁹ The department did not document if a trade exception applied to the work in the four cases above. Its current contracts define extra work as work that is outside the scope or intent of the contract. It is not clear if it is appropriate to include as part of the highway maintenance contract work that is outside the scope or intent of the contract. If the cost of this extra work is over \$100,000, the department risks not complying with its policy unless there is a valid trade exception. Of the 10 extra work samples we tested, nine were over \$100,000.

The department lacks controls for pricing and approving all extra work

The department's guidance says regional staff should try to get a minimum of three quotes when pricing extra work. In all 10 extra work orders we examined, the department had only one quote from the contractor.

For one extra work order over \$8 million, the department had evidence of proper approval for only about half the amount. This work order included paving, surfacing, patching, and related activities.

NEW Recommendation:

Improve guidance and processes to administer extra work

We recommend that the Department of Transportation and Economic Corridors improve its guidance and processes to administer extra work.

CONSEQUENCES OF NOT TAKING ACTION

The department risks financial penalties and a loss of public and industry confidence if it violates trade agreements. And the department may pay more than it should for extra work.

⁹ Defined as an exception drawn from the New West Partnership Trade Agreement in respect of services or construction; if such an exception exists, the contract can be sole sourced.

About This Audit

Objective and Scope

Our audit objective was to assess whether the department has effective processes to ensure:

- it monitors the performance of its highway maintenance contractors
- the contract delivery structure is appropriately supported

We audited contract management processes under both unit-rate and performance-based contracts, including work orders for various highway maintenance activities from 2021 to 2023. All signed highway maintenance contracts were in-scope for this audit, including the recently tendered 2024 contracts.

The department signed new contracts in 2019 and 2024. We examined both the 2019 and 2024 contracts to assess the department's processes to evaluate contract delivery structure. Our audit did not focus on:

- the condition of highways or the department's systems to manage a safe provincial highway network
- administration of contracts other than highway maintenance contracts, including P3 contracts
- oversight over sub-contractors where the department has no direct responsibilities
- the decision to outsource highway maintenance activities versus completing in-house

Criteria

To determine whether the department had effective processes to monitor the performance of its highway maintenance contractors and the contract delivery structure is appropriately supported, we used the following criteria. The department should:

- monitor and evaluate contractor performance through inspection or reporting to support payment for work done
- complete ongoing cost-benefit analysis of the contract delivery structure

We developed the criteria for this audit based on the department's responsibilities and industry best practices, including guidance from the Government of Alberta's Procurement Accountability Framework (PAF) and PAF manual, and our July 2014 Results Analysis Framework.

Management of Transportation and Economic Corridors acknowledged the suitability of the audit criteria on December 5, 2023.

Audit Responsibilities and Quality Assurance Statement

Management of Transportation and Economic Corridors is responsible for managing the maintenance of Alberta's roads and highways.

Our responsibility is to express an independent conclusion on whether the Department of Transportation and Economic Corridors had effective processes to ensure it monitors the performance of its highway maintenance contractors and the contract delivery structure is appropriately supported.

All work in this audit was performed to a reasonable level of assurance in accordance with the Canadian Standard on Assurance Engagements (CSAE) 3001—Direct Engagements, set out in the CPA Canada Handbook—Assurance. The Office of the Auditor General applies Canadian Standard on Quality Management 1, which requires the office to design, implement, and operate a system of quality management, including policies and procedures regarding compliance with ethical requirements, professional standards, and applicable legal and regulatory requirements. The office complies with the independence and other ethical requirements of the Chartered Professional Accountants of Alberta Rules of Professional Conduct, which are founded on fundamental principles of integrity and due care, objectivity, professional competence, confidentiality, and professional behaviour.



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