



Audit of Toronto Water: Stormwater and Wastewater Contract Management

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Auditor General

**AUDITOR
GENERAL**

TORONTO

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Executive Summary

The Auditor General's 2025 Work Plan included an audit to assess the effectiveness and efficiency of Toronto Water's stormwater asset management program, including examining sewer system inspections, maintenance, and repairs.

Sewer systems are critical infrastructure

Sewer systems play a critical role in the City's stormwater and wastewater infrastructure. Toronto Water manages City sewer systems, which collect and transmit wastewater to treatment facilities for processing and direct stormwater to local drainage systems or waterways.

Why this audit matters

Maintaining the City's sewer systems in a state of good repair is essential for providing reliable sewer services to Toronto residents and businesses, and maximizing a return on assets. Aging infrastructure and lack of maintenance can lead to asset failures. In recent years, disruptive incidents in North America caused by sewer system failures have led to public health risks, harmful environmental impacts, property damage, and costly repairs.

Consultants and contractors carry out state-of-good-repair projects

The Toronto Water Capital Works Delivery unit is responsible for engaging and overseeing construction contractors (contractors) and professional consulting firms (consultants) to carry out sewer, forcemain, and pump station state-of-good-repair (SOGR) projects. The contractor is responsible for all construction-related tasks while the consultant is responsible for overall project and contractor management. **Figure 2** in the **Background** section outlines the roles and responsibilities of Toronto Water, the contractor and the consultant. Refer to **Exhibit 1: Glossary** for terminology used in this report.

Audit objective

The objective of this audit was to assess whether Toronto Water has systems and processes in place to ensure that state-of-good-repair stormwater and wastewater projects for local sewers, forcemains and pump stations are delivered in accordance with the expected outcomes and terms and conditions defined in these contracts, as well as the City's policies and procedures. This audit aimed to answer:

- 1) Does Toronto Water's contract management oversight ensure the work of consultants and contractors meets the expected outcomes and terms and conditions defined in the contracts?
- 2) Are contract payments supported, accurate, and authorized by Toronto Water in accordance with the City's policies and procedures?

What We Found

Overall, most state-of-good-repair stormwater and wastewater projects were delivered on budget (which includes provisional and contingency allowances¹).

Toronto Water must strengthen accountability and oversight of contractors and consultants

However, Toronto Water must strengthen accountability and oversight of contractors and consultants to ensure timely project delivery, and confirm all contract changes are adequately supported, diligently reviewed, and approved. This means ensuring consultants adequately scrutinize contract changes and progress payments before recommending approval to the City.

Better change order management, inter-divisional coordination and performance monitoring are needed

Better tracking, monitoring, and analyzing of change orders may help inform management decisions, and better plan the scope, budget and schedule for current and future projects. There is also a need to improve inter-divisional coordination as some change orders and project delays occurred due to conflicts with other capital asset work in the City. Furthermore, enhanced performance evaluations and monitoring will support more effective contract management going forward.

Our detailed findings and recommendations are summarized as follows:

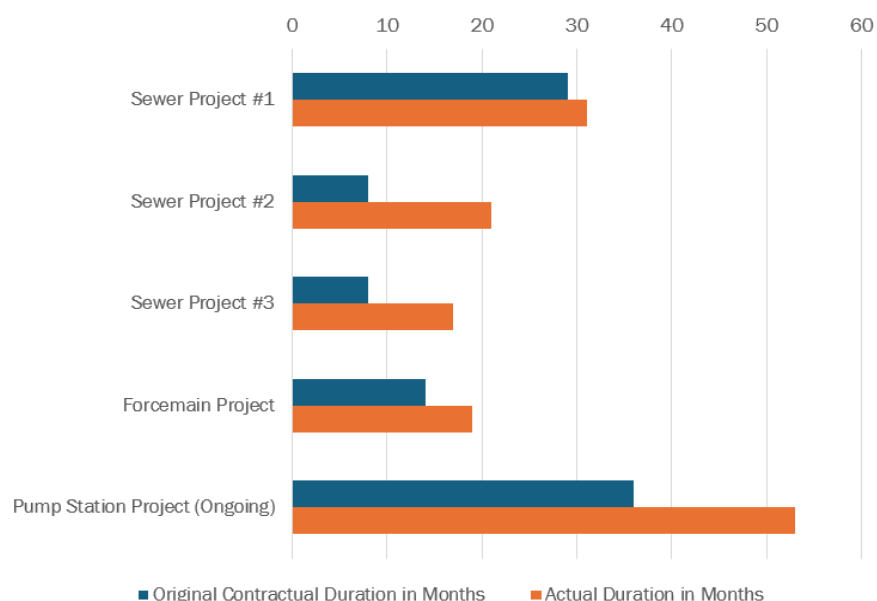
A. Ensuring Projects Remain on Schedule and All Time Extensions and Liquidated Damages Are Properly Supported and Documented

We found that many projects took longer to complete than originally planned. We reviewed 18 projects completed between January 1, 2020 and March 31, 2025, and 17 of the 18 (94 per cent) projects did not meet the originally planned substantial performance date. For all 17 projects, there were requests and approvals to extend their substantial performance date, including one project that was extended by almost four years. Based on identified risks, we selected five projects for a detailed review. See results in the figure below.

¹ A project's budget consists of the contract's base scope cost, a provisional allowance, and a contingency allowance. Change orders draw on these allowances. Refer to **Section B.1.** for details.

Comparison of Original and Actual Duration for Our Five Sampled Projects

Prepared by the Auditor General's Office



Note: Four projects have reached substantial performance, and one (pump station project) remains in progress.

Delayed waste and stormwater infrastructure projects can have wide-ranging impacts:

- When construction projects are extended, Toronto communities may face prolonged inconvenience as essential infrastructure is not fully functional, increasing the risk of underpass flooding, property damage, and traffic congestion.
- These delays can also expose the City to significant financial risks. For example, the City paid \$2.85 million to account for material and supply price escalation along with additional consultant fees resulting from delays related to the pump station project. Contractors may also file delay claims against the City. For the forcemain project, the City paid over \$260,000 to the contractor to compensate for delays, while an additional \$3.5 million for the pump station project is currently under dispute.
- Delays can also potentially lead to leaks and environmental contamination.

\$2.85M paid for additional consultant fees and material and supply price escalation due to delay

Management informed us that sewer projects are typically made up of many different sewer segments across the City. When contractual deadlines are extended, delays in one segment do not necessarily impact others, which can often continue as scheduled.

It is important to understand which delays are caused by factors that Toronto Water can control

While we acknowledge some delays may result from deliberate decisions or affect a small area, it is still important to understand which delays are caused by factors that Toronto Water can control. This helps to improve accountability and timely delivery. We also found that there is no centralized system to track all project delays, analyze delay trends across projects, or identify any systemic root causes of delays. Analyzing the extent and reasons for delays can help identify lessons learned and explore solutions to improve processes.

Lack of documentation to substantiate project delays

We found that requests to extend a project's substantial performance date were not always supported by adequate documentation. Our five sample projects had a total of 43 approved time extension requests, of which we randomly selected and reviewed 12. None of the 12 samples had an updated project schedule attached. Three out of the 12 did not have any supporting documentation to substantiate delay events, or did not clearly explain the delay event impact on key project milestones. This lack of documentation substantiating delay events reduces accountability and hinders the ability to track who is accountable for delays.

Despite missing required documentation, Toronto Water still approved these time extension requests based on consultant recommendations. It is unclear whether consultants exercised sufficient scrutiny when assessing and recommending approval for time extension requests. Unless contractors requested financial compensation along with time extensions, there was limited evidence that the consultants assessed the extent of delays resulting from individual events, or their connection to the overall schedule. If time extensions are approved without sufficient justification and proper verification, the City cannot claim liquidated damages (pre-estimated compensation for losses incurred by the City) and recover financial losses due to project delays.

B. Improving Adherence to Change Directives Process and Ensuring Change Orders Are Properly Documented, Analyzed and Tracked

Mark-up overage leading to overpayment of \$122,781

We found that 16 of the 18 (89 per cent) completed projects were on budget (which includes provisional and contingency allowances). However, in one project, we found that five out of eight (63 per cent) approved change order samples we reviewed exceeded the mark-up ceiling specified in the contract. The consultant did not catch the mark-up overage, leading to overpayment. According to staff, Toronto Water has taken action to begin recovery of the mark-up overage totalling \$122,781 for this project.

Change order work was performed by contractors without City approval or knowledge

Our sample review found extra work was performed by contractors without City approval or knowledge because the City's change directives² process was not followed. We found that 57 per cent of our sample change orders³ did not have all the required documentation, such as rationale for the change request and a breakdown for lump-sum charges. Without sufficient supporting documentation, it is difficult for the City to assess whether these changes and prices are reasonable. We also noted that there was no training or refreshers provided on operating procedures or the manual⁴, which could help project managers understand City requirements.

No centralized system to track change orders limits the ability to analyze data and trends

The Capital Works Delivery unit does not have a centralized way to track change orders and relies on consultants to manually maintain a summary for each contract. Tracking and performing timely analyses of change orders can help Toronto Water better monitor and plan for project scope, budget and schedule for current and future projects. We performed our own analysis for the five project samples and noted that "unforeseen site conditions" and "contract item quantity changes/underruns" accounted for most change orders. Some unforeseen site conditions were due to conflicts with other capital asset work in the City, indicating a need to improve inter-divisional coordination. While unforeseen site conditions are not unusual for these types of projects, a high number of change orders could indicate a need to better consider commonly recurring issues during the project planning phase. Analyzing change orders may help project teams better plan for provisional items on future projects.

² A change directive is an order to the contractor to proceed with a change in the work, prior to or in the absence of the City and the contractor agreeing upon adjustments in the contract price and the contract time.

³ A change order is a written amendment to the contract and is typically used for contingencies, change in the work, extra work, additional work, and obtaining credit for deleted scope.

⁴ Toronto Water uses the Engineering and Construction Services Division's Capital Works Procedures Manual for capital projects.

C. Implementing Better Performance Management for Consultants and Contractors

We identified several additional areas where management oversight of consultants and contractors needs improvement:

Practices for Daily Inspection Reports did not comply with City requirements

Daily Inspection Reports: We reviewed the inspection records for five projects prepared by three different consultants. We found the reports were not consistent among the consultants or consistent with the City's template to document site inspections, resulting in incomplete records. Visits to different work sites were not separately reported, and many records were missing required sign-offs by inspectors and contractors. In addition, Toronto Water staff does not regularly monitor the submission and receipt of inspection records from consultants. These practices do not comply with City requirements, making it difficult to verify progress payments and hold consultants and contractors accountable.

Consultants took 5 to 35 working days (on average) to respond to contractor information requests

Timeliness of Consultant Responses: Toronto Water staff need to ensure that consultants respond to Request for Information (RFIs) and other submissions from contractors promptly and in line with contractual timelines. The average response time ranged from five to 35 working days. This response time exceeded the required five working days for the majority of the RFIs (64 to 79 per cent) in three of the sampled projects, and the other two projects (36 to 38 per cent) still required improvement. In 10 extreme cases, consultants took more than four months to respond to RFIs. Any delay in response increases the risk of delay claims and exposes the City to financial losses.

32 out of 35 progress payment samples did not have all the required supporting documentation

Supporting Documentation for Progress Payments: We reviewed a sample of 35 progress payments and noted that while all 35 progress payment samples had proper authorization, 32 out of 35 samples (91 per cent) did not have all the required supporting documentation. Most commonly, the contractor's daily work records were missing in the majority of our samples. There were also instances of other missing key project and insurance documents. This documentation is important because it supports the contractor's bills, prevents cost disputes, and minimizes the City's exposure to significant legal and financial risks.

Contractor and consultant performance evaluations were not completed for some and completed late for others

Contractor and Consultant Performance Evaluations: Implementing regular and timely performance evaluations will improve accountability and procurement decision-making. While the sampled contracts we reviewed had completed at least one interim performance evaluation, none met the minimum number required by the Purchasing & Materials Management Division (PMMD). For four of the sampled contracts, the interim evaluations were performed late. Moreover, we noted that vendors did not prepare any corrective action plans to address areas needing improvement, leading to repeated low scores in specific areas in subsequent evaluations.

Toronto Water has limited performance measures for consultants and contractors

Key Performance Indicators: Toronto Water has limited performance measures in place to drive and monitor performance of consultants and contractors. We found that consultant contracts have no specific performance indicators to promote proactive project management and oversight. KPMG's March 2025 Capital Delivery Review⁵ already noted that City contracts for contractors typically only use liquidated damages as the lever to motivate contractor performance. In addition, we found that Toronto Water could benefit from establishing and monitoring more performance measures and desired outcomes at a program-wide level.

Conclusion

Maintaining the City's sewer systems in a state of good repair is essential to maximize a return on assets and to provide reliable sewer services to Toronto residents and businesses. Effective contract management is necessary to ensure that state-of-good-repair stormwater and wastewater projects for local sewers, forcemains and pump stations are delivered according to expected outcomes, and terms and conditions defined in the contracts.

For our first audit objective, to assess whether Toronto Water's contract management oversight ensures consultant and contractor work meets expected outcomes and terms and conditions of the contracts, we found that state-of-good-repair stormwater and wastewater projects for local sewers, forcemains and pump stations are mostly delivered within budget (which includes provisional and contingency allowances).

⁵ [March 2025 KPMG Capital Delivery Review Final Report](#)

However, we found that these projects are often delayed, which can potentially have an effect on local communities, the environment, and cost to the City. Toronto Water also needs to improve its consultant oversight to ensure time extension requests, liquidated damages assessments, and response times to contractors comply with contractual and City requirements. In addition, we noted Toronto Water and its consultants did not always follow the City's change directives and change order processes, leading to some work done without City approval or knowledge, and a lack of supporting documentation.

For our second audit objective, we found that contract payments were mostly accurate and authorized. However, they lacked sufficient documentation in accordance with the City's policies and procedures, such as complete inspection forms and contractors' daily work records.

Implementing the 12 recommendations contained in this report will help Toronto Water improve the effectiveness and efficiency of its contract management oversight of state-of-good-repair projects. In particular, the recommendations identify opportunities for:

- clarifying consultants' scope of work and deliverables in the contract, and City policies and procedures, to provide clearer guidance to staff and vendors on time extension requests, liquidated damages, change directives, change orders, inspection records and progress payments;
- greater staff oversight of consultants and strengthening performance evaluation processes to ensure consultants sufficiently review contractor performance and follow contractual requirements and City policies and procedures;
- analyzing change order root causes and trends to improve monitoring and management of project budget and schedule; and
- coordinating with other City Divisions, Agencies and Corporations to improve city-wide capital project information flow, standard contract clauses, and key performance indicators.

While this audit focused on the state-of-good-repair projects specifically for sewers, forcemains and pump stations, many of our recommendations can also be applied in managing other capital projects at Toronto Water.

**Thank you to
management and staff**

We would like to express our sincere appreciation for the co-operation and assistance we received during our audit from Toronto Water management and staff.

Background

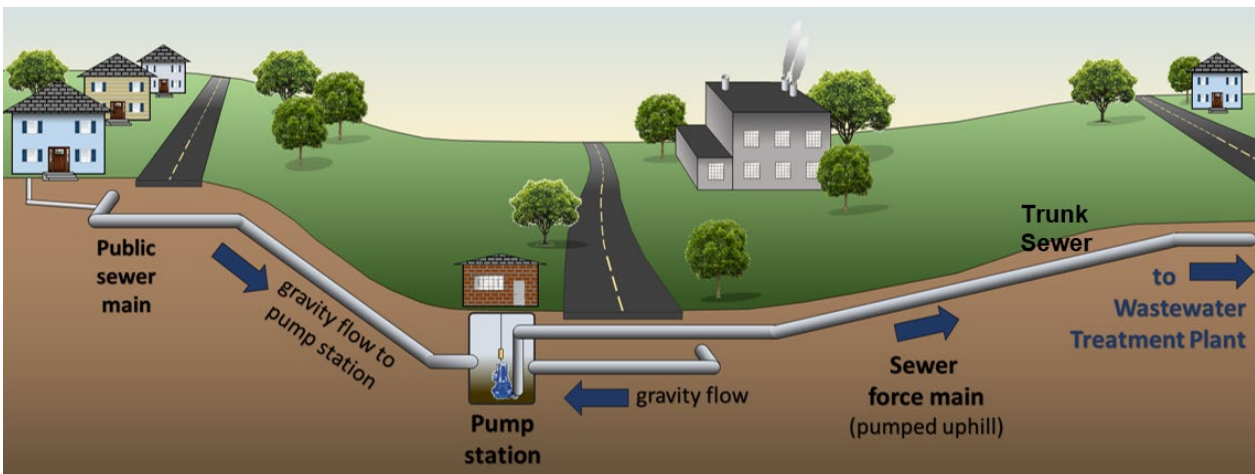
Sewer Systems Are Critical Infrastructure

Sewer systems play a critical role in the City's stormwater and wastewater infrastructure. Toronto's sewer systems collect and transmit wastewater to treatment facilities for processing and direct stormwater to local drainage systems or waterways.

Toronto Water manages the City's sewer system, consisting of the following major components as illustrated in **Figure 1** below.

Figure 1: Major Components of City's Sewer System

Source: Toronto Water



- **Local sewers** collect wastewater and stormwater from homes and businesses.
- **Trunk sewers**⁶ are large capacity sewers that collect and transport wastewater and stormwater from local sewers to treatment facilities or local waterways.

⁶ Complex repairs, rehabilitation and replacement projects for trunk sewers are delivered by a separate City Division, Engineering and Construction Services, using external contractors. This is not covered within the scope of this audit.

- **Forcemains** are pressured sewer pipes and work with **pump stations** to carry flow from lower to higher elevation, preventing backups and overflows.

See **Exhibit 1: Glossary** for terminology used in this report.

Why Is Maintaining the City’s Sewer Systems Important?

Maintaining the City’s sewer systems in a state of good repair is essential for maximizing the return on assets and providing reliable sewer services to Toronto residents and businesses.

Aging infrastructure and lack of maintenance can lead to asset failures. For example:

- In June 2024, a major forcemain pipe in Vancouver, British Columbia burst and flooded parts of the Olympic Village with raw sewage. Repairs were reported to cost over \$7 million.
- Between 2022 and 2024, Prince Rupert, British Columbia experienced several sewer outfall failures. Raw sewage spilled into local creeks and the harbour, affecting ecosystems that are home to wildlife, including endangered species such as Steller sea lions and humpback whales. The city was fined \$165,000 for environmental violations.
- In 2022, aging sewer pipes collapsed beneath a residential street in Baltimore, Maryland, United States and created a massive sinkhole, demolishing homes and displacing families. One resident sued the City of Baltimore for failing to inspect and maintain the underground infrastructure and received a \$250,000 settlement.

Toronto Water’s Capital Works Delivery Unit

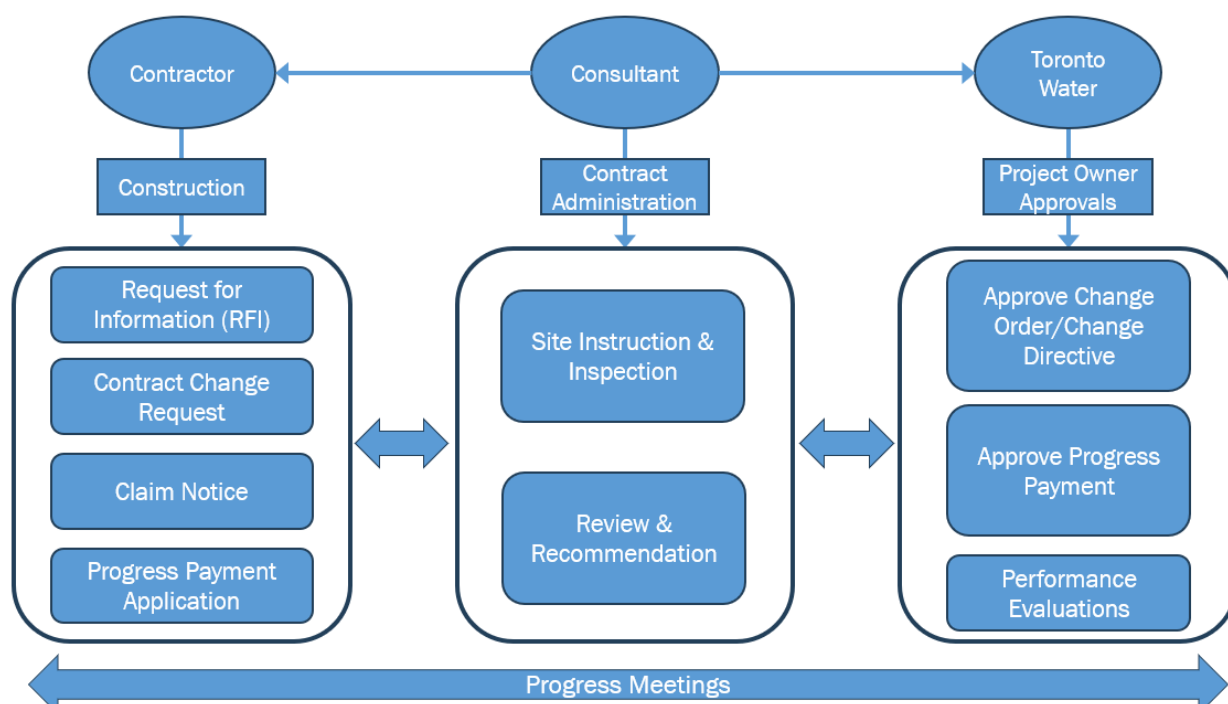
Capital Works Delivery unit oversees state-of-good-repair sewer, forcemain and pump station projects

While planned infrastructure repairs, rehabilitation, and replacement of sewer pipes and pumping stations are a collaborative effort between various Toronto Water business units, the Capital Works Delivery unit is mainly responsible for overseeing these projects.

The Capital Works Delivery unit hires professional consulting firms (consultants) and construction contractors (contractors) to carry out sewer, forcemain, and pump station state-of-good-repair (SOGR) projects. The contractor is responsible for all construction-related tasks while the consultant is responsible for overall management of the project and the contractors. All three stakeholders participate in regular progress meetings to stay updated on project progress.

Figure 2 outlines the roles and responsibilities of Toronto Water, the construction contractors and the professional consulting firms.

Figure 2: Roles and Responsibilities of Toronto Water, Contractors and Consultants
 Prepared by the Auditor General's Office



Note:

Toronto Water engages consultants to manage contractors and perform contract administration, and to ensure that construction is progressing in accordance with agreement and design. Consultants are responsible for conducting site inspections to observe construction work, and for providing instructions and clarifying contract and design when contractors encounter a problem during the project.

Consultants also review and respond to contractor submissions, including requests for information, contract change requests, claim notices/delay claims, and applications for payment. They also make recommendations to Toronto Water project managers for approving proposed changes to work scope, project schedule, and progress payments.

Audit Results

A. Ensuring Projects Remain on Schedule and All Time Extensions and Liquidated Damages Are Properly Supported and Documented

A City project's contractual duration is measured from the official work start date to the date of substantial performance, which is when the state-of-good-repair (SOGR) work is sufficiently complete and the sewer, forcemain or pump station can be used for its intended purpose. The final project completion date may differ, as some minor tasks may still need to be done. When delays occur during the project, a contractor may seek to extend the contractual deadline by submitting a written time extension request.

A. 1. Many Projects Took Longer Than Originally Planned

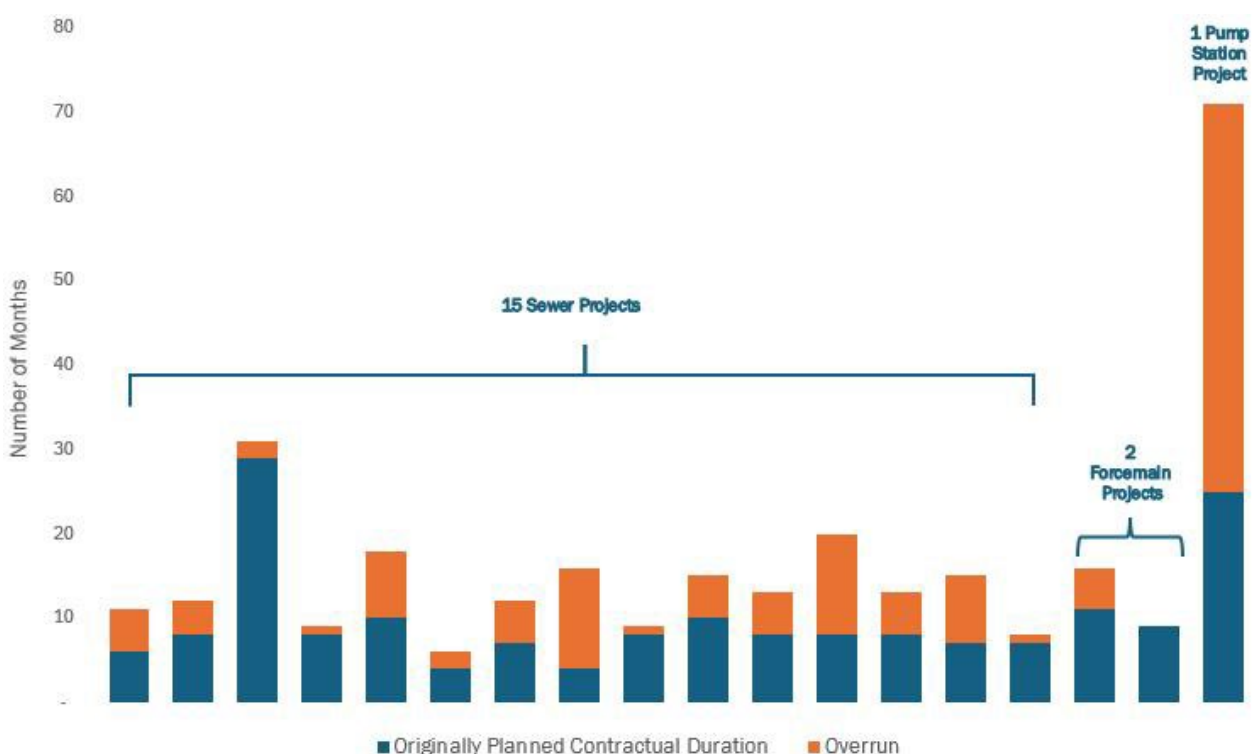
17 out of 18 contracts did not meet the originally planned substantial performance date, all of which had requested and received approved deadline extensions

Our audit found that many projects took longer than originally planned. Between January 2020 and March 2025, the Capital Works Delivery unit oversaw 29 sewer, forcemain and pump station SOGR projects. Of these, 18 had been completed and 11 were still ongoing at the time of our audit. We reviewed 18 completed projects which included 15 sewer, two forcemain, and one pump station projects. We found that 17 of the 18 (94 per cent) projects did not meet the originally planned substantial performance date. For all 17 projects, there were requests and approvals to extend their substantial performance date, including one project that was extended by almost four years.

When construction projects are extended, Toronto communities may face prolonged inconvenience, as essential infrastructure, such as pump stations, may not be fully functional, increasing the risk of underpass flooding, property damage, and traffic congestion. Additionally, delays can potentially lead to leaks, environmental contamination, and other financial consequences. **Figure 3** below shows overrun durations for each project, ranging from one month up to almost four years.

Figure 3: Project Schedule Variance Compared to Originally Planned Contractual Duration for the 18 Completed Projects

Prepared by the Auditor General's Office



Specifically, we noted that:

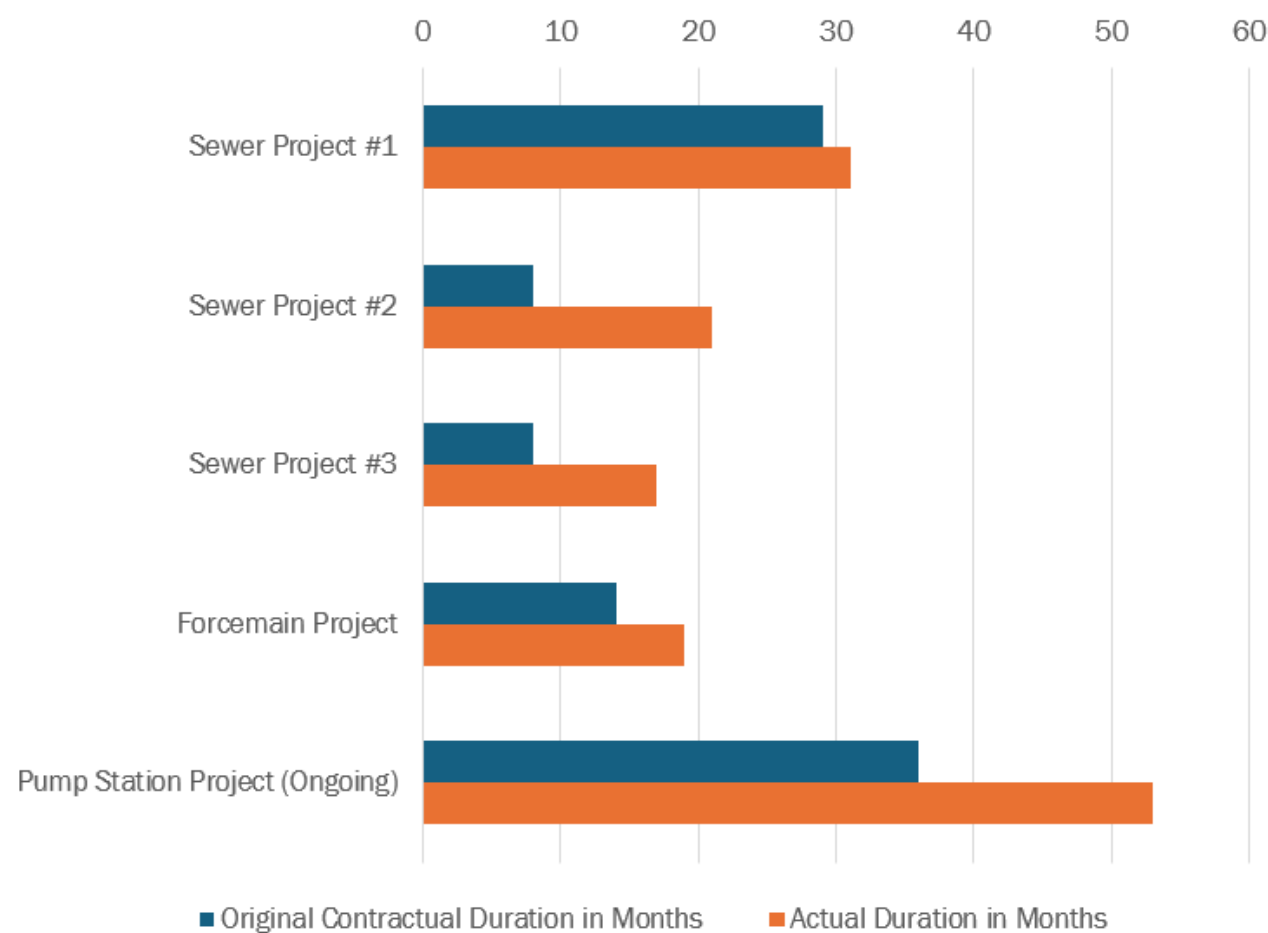
- All 15 sewer projects took longer than originally planned, with the extension durations ranging from one to 12 months.
- One forcemain project was delayed by five months, while the other reached substantial performance as planned.
- The pump station project was delayed by 46 months (almost four years).

Management informed us that sewer projects are typically made up of many different segments across the City. While contractual deadlines are extended, delays in one segment do not necessarily impact others, which can often continue as scheduled. At times, additional unplanned work was strategically added to take advantage of favourable weather. While we acknowledge some delays may result from deliberate decisions or affect a small area, it is still important to understand which delays are caused by factors the Capital Works Delivery unit can control. This helps improve accountability and timely delivery.

Five projects we reviewed in detail exceeded original timelines

We selected five of the 29 projects for a detailed review to understand the potential root causes and impact of delays, evaluate whether decisions to extend deadlines are reasonable, and assess whether management has controls in place to minimize delays. See **Audit Objectives, Scope and Methodology Section** for our sampling methodology. This included four projects that reached substantial performance and one ongoing project. The four projects that reached substantial performance ran over the originally planned timeline by approximately two to 13 months. The remaining project is still ongoing but already exceeded its scheduled completion date by 17 months at the time of our audit. See results in **Figure 4** below.

Figure 4: Comparison of Original and Actual Duration for Our Five Sampled Projects
Prepared by the Auditor General’s Office



\$2.85M paid for additional consultant fees and material and supply price escalation due to delay, and \$3.5M remains under dispute

Delays can lead to significant financial impacts for the City. For example, for the pump station project, the City had to pay \$2.85 million for additional consultant fees and material and supply price escalation due to delays. An increase to the contingency allowance was required to cover these amounts through a purchase order

amendment.⁷ Contractors may also file delay claims against the City. For this pump station project, there is an additional \$3.5 million claim currently under dispute between the City and the contractor.

For the forcemain project, the City paid over \$260,000 from its contingency funds to compensate the contractor for delays. While the cost was covered by the contingency allowance, compensating the contractor for delays indicates that Toronto Water or the consultant may have contributed to the delays. Such occurrences should be proactively minimized. Typically, additional time and funding are also required to renew permits and coordinate activities when projects fall behind schedule or are extended.

We also noted that there is no centralized system to track all project delays, analyze delay trends across projects, or identify the systemic root causes of delays. Neither consultants nor Toronto Water conduct root cause analyses to determine whether any delays could have been avoided or anticipated. For example, analyzing whether delays could be attributed to design errors, omissions, scope changes due to insufficient planning, or to document lessons learned for future projects.

Toronto Water staff informed us that the main reasons for project schedule extensions were typically:

- Unforeseen site conditions, including unexpected sub-surface discoveries and conflict with other ongoing City projects,
- Authorized scope changes, and
- Coordination with utilities.

While some delays are beyond contractor control, analyzing the extent and reasons for delays can help identify lessons learned and explore solutions to improve processes. This is discussed in more detail in **Section B.4**.

Recommendation:

- 1. City Council request the General Manager, Toronto Water, to minimize project delays by actively monitoring, analyzing, and documenting the root causes and trends of delays.**

⁷ [February 25, 2025 General Government Committee decision](#)

A. 2. Approved Time Extensions Were Not Always Sufficiently Supported and Verified

We found that time extension requests were not always supported by adequate documentation. Lack of documentation to substantiate delay events reduces accountability and hinders the ability to track who is accountable for delays. Evidence of the consultant's proper validation also requires improvement. If time extensions are approved without sufficient support and proper verification, the actual cause of a delay cannot be accurately determined and allocated to the proper party. Accordingly, the City may compensate the contractor for delays to which the City is not responsible. It may also hinder the City's ability to track delays to which the contractor is responsible and, in turn, hinder the City's ability to obtain liquidated damages (discussed further in the next section) when the substantial performance date has not been met as required.

It is not unusual for construction projects to experience delays due to factors such as weather events, design or scope modifications, unforeseen site conditions, material and labour shortages, and late permits or approvals. Time extensions to a contractual deadline are allowed and approved when delays occur beyond a contractor's control. See **Exhibit 2** for common situations where contract time extensions are allowed and the process for requesting time extensions.

Time extension requests were approved despite missing required documentation

At the time of our audit, our sample of five projects had a total of 43 approved time extension requests, of which we randomly selected and reviewed 12 samples. See **Audit Objectives, Scope and Methodology Section** for an overview of our sampling methodology. Specifically, we noted that:

- None of the 12 samples had an updated project schedule attached.
- Three out of the 12 time extension requests did not have any supporting documentation to substantiate delay events, or the delay event impact on key project milestones was not clearly explained.

Despite missing required documentation, Toronto Water still approved these time extension requests based on the consultants' recommendations.

Unclear whether consultants thoroughly reviewed time extension requests

Without this required documentation from contractors, it is unclear whether consultants exercised sufficient scrutiny when assessing and recommending time extension request approval. Unless contractors requested financial compensation along with time extensions, there was limited evidence that the consultants assessed the extent of delays resulting from individual events, or their connection to the overall schedule.

No standards specify the required documentation for consultants' reviews

We found that Toronto Water does not have standards specifying what documentation or evidence is required to substantiate the consultants' reviews. Furthermore, time extension requests without a financial claim for compensation by the contractor tend to receive less attention from the Capital Works Delivery unit, even though they may disrupt the community and impact scheduling of other City capital projects.

For example, one project requested a 25-day extension due to a subcontractor's failure to deliver the correct material. The cause for delay was coded as an unforeseen event. Toronto Water staff informed us that the time extension request was approved based on other concurrent delay events such as design changes, site access issues, and inclement weather. However, these additional contributing factors were not fully supported by the documentation provided. Furthermore, there was no analysis of the cause and responsibility for each delay event. We did not find any documented discussion on whether the delayed task had schedule flexibility, how it impacted the overall project schedule, or any plans to recover lost time.

We identified the following areas where the Capital Works Delivery unit should strengthen its oversight and collaborate with consultants to improve documentation justifying time extension requests:

- **Clearly explain the relevance of each delayed task in the context of the overall project schedule.** Some project tasks must be performed in sequence, while others can occur concurrently. As a result, project tasks that are longer than planned may not necessarily impact the project's overall schedule, as the timing of less critical or non-critical activities is often flexible. Making this distinction can help hold all stakeholders accountable to the agreed schedule and actively seek mitigation efforts when delays occur.
- **Consistently document the applicable contract provisions that justify delay event approvals in time extension requests.** We noted that in nine of the 12 samples (75 per cent), consultants did not reference the specific contract provision that would allow the time extension when providing recommendations to Toronto Water. This is especially important when delays are caused by multiple or concurrent events. Referencing specific contractual clauses when approving extensions ensures that decisions are transparent, consistent, and aligned with City contract terms.
- **Require consultants to provide evidence of their independent validation when recommending time extensions.** Consultants should proactively follow up on any missing documentation from contractors. Toronto Water should also require consultants to document any efforts to negotiate, reduce and recalculate the negative impact to the project schedule, which

encourages consultants to fulfill their role as professional contract administrators.

Recommendation:

2. City Council request the General Manager, Toronto Water, to:
 - a. Clarify consultants' scope of work and deliverables in the contract, and City policies and procedures to provide clearer guidance on evaluating time extension requests, including requiring contractors to submit substantiating documentation, and requiring consultants to fully review and validate these requests through delay analysis before consideration by the Capital Works Delivery project manager; and
 - b. Ensure that contractors attach all required documentation and consultants sufficiently document rationale to approve time extensions in accordance with the updated contract terms, City policies and procedures.

A. 3. Rationale for Not Assessing Liquidated Damages Was Not Always Documented

Liquidated damages are defined in the contracts as “a per day, reasonable and genuine pre-estimate of the actual damage that will be incurred by the City if the contractor fails to achieve substantial performance as required.” Liquidated damages are applied if the date of substantial performance of work exceeds the contractual deadline, as may be adjusted by change order from time to time throughout the contract. According to the manual⁸, the rationale for assessing and not assessing liquidated damages must be documented in a memo to file.

Rationale for not assessing liquidated damages was not always documented

Of the five sample projects we reviewed, we found that:

- In two sample projects, contractual deadlines were extended by nine and 13 months, respectively, through approved change orders. As a result, the contracts were evaluated based on the revised deadlines, eliminating the basis for liquidated damages.
- In two other sample projects, there were a few unapproved delay days, which staff attributed to administrative delays related to paperwork processing and transitioning to a different consultant.

⁸ Toronto Water uses the Engineering and Construction Services' Capital Works Procedures Manual for capital projects.

- One ongoing, remaining project has exceeded its scheduled completion date by 17 months at the time of our audit. The contractor has submitted delay claims against the City, which are currently under dispute.

Lack of an effective electronic system to track unwarranted delays

We found that Toronto Water does not have an effective electronic system to track unwarranted delays to enforce liquidated damages. The Change Order Summary for each contract does not include information showing the total number of delay days, broken down by cause and responsible party.

We also found that approved change order entries did not always contain complete information. For example, the number of delay days were frequently marked as 'To be Determined (TBD)' or left blank. Toronto Water staff explained that not all delay events could be resolved when the change order was approved. As a result, the change was approved on an interim basis without fully understanding its impact on the project schedule. The frequency of these occurrences combined with the lack of updated schedules limit Toronto Water's ability to effectively monitor project progress, mitigate against delay claims, and efficiently assess the need for liquidated damages.

Recommendation:

3. City Council request the General Manager, Toronto Water, to:

- Ensure Capital Works Delivery project managers and external consultants follow City contract terms, policies, and procedures, relating to documenting the rationale for assessing or not assessing liquidated damages or delay claims; and**
- Improve the tracking and reconciling of delay days, clearly identifying who is responsible for the delays, to support the enforcement of liquidated damages.**

B. Improving Adherence to Change Directives Process and Ensuring Change Orders Are Properly Documented, Analyzed and Tracked

A project's budget includes provisional and contingency allowances

A project's budget consists of the contract's base scope cost, a provisional allowance, and a contingency allowance. The provisional allowance covers items such as traffic control, that can be specified with enough detail at time of tender to request a price. However, whether the item will actually be used, and in what quantity, is unknown. The contingency allowance is for unplanned items outside the base scope cost and provisional allowance. The percentage of the contingency allowance varies and typically ranges from 10 to 15 per cent of the sum of the base scope and provisional items.

All items charged to provisional and contingency allowances require a change order

The five projects we reviewed in detail had a contingency allowance between six to 10 per cent. All items drawing on provisional and contingency allowances (i.e., outside of the contract's base scope cost) require a change order to document the rationale and approval. If a change order cannot be finalized before work begins, a change directive must be issued. The consultant is responsible for preparing change order and change directive packages with supporting documentation for the City's review and approval.

B. 1. Most Projects Completed Within Budget, With Change Orders Covered by Provisional and Contingency Allowances

16 of 18 completed projects were on budget, which includes provisional and contingency allowances

We found that 16 of the 18 (89 per cent) completed stormwater/wastewater pump stations, forcemains, and local sewer projects in the last five years were on budget. While all 18 projects had a large number of change orders, all but two were sufficiently covered by the provisional and contingency allowances. One of these two projects was over budget by \$3.9 million due to a delay claim.

As discussed in **Section A**, we selected five projects for detailed review and noted that the cost of change orders was mostly covered by provisional and contingency allowances ranging from 11 to 17 per cent. From these five projects sampled, we further reviewed a sample of 35 change orders to assess whether changes were legitimate, costs were supported, and that the change order process adhered to City policies and procedures. See **Audit Objectives, Scope and Methodology Section** for our sampling methodology. See **Figure 5** below for high-level statistics for the five sample projects and our detailed findings in sections below.

Figure 5: Projects Selected for Detailed Review

Prepared by the Auditor General's Office

Capital Project	Original Contract Value	# of Change Orders	Total \$ of Change Orders	Average \$ of Change Orders	\$ Change Orders as a % of Contract Value
Sewer Project #1	\$17,373,151	90	\$1,327,177	\$14,746	8%
Sewer Project #2	\$7,231,825	111	\$1,178,120	\$10,614	16%
Sewer Project #3	\$9,433,465	43	\$500,841	\$11,647	5%
Forcemain Project	\$17,539,027	44	\$915,848	\$20,815	5%
Pump Station Project - Ongoing*	\$26,546,800	148	\$2,903,411	\$19,618	11%

*Data for this ongoing project is as of August 29, 2025.

B. 2. Change Directives Process Was Not Followed

According to the manual, change directives “provide written direction to contractors to proceed with performing changes to the original contract scope prior to agreeing on adjustments in price and time – in other words, before a change order is issued. They are typically issued in situations where the work is time-sensitive and cannot wait for the issuance of a change order, for example, key deliverables or emergency work. They keep work progressing, assist in avoiding delays, and provide contractors with assurance that the work is authorized and that payment will be made.” The consultant prepares the change directive package using the City’s standard change directive form, which documents the description and approval of a change before a change order is issued.

Contractors performed extra work without City approval or knowledge

Our sample review found that contractors performed extra work without City approval or knowledge because the City’s change directives process was not followed. We also found that the consultants did not use the standard City form to document change directive requests and approvals, leading to a lack of documentation to support changes.

In 23 out of 35 (65 per cent) change orders we sampled, work was performed before issuance of a change order, which would require a change directive to be issued. All 23 samples did not use the City’s standard change directive form, which is required under the Capital Works Delivery unit’s Standard Operating Procedures (SOPs) and the manual.

Change directive forms document City approval and directions, which help keep contractors accountable for work changes and are important records in case of potential future disputes between the City and the contractor.

Capital Works Delivery project managers informed us that informal approvals were instead provided through emails, phone calls, or meetings, making a change directive form redundant. This contradicts the City’s change directive procedure which states that for changes authorized informally, even if an emergency, a change directive must then be issued as soon as possible, followed by the change order. The contract terms require a change directive to be in writing.

78% of samples lacked evidence of the City’s approval before work began

In 18 out of 23 (78 per cent) samples where work was performed before issuance of a change order, we did not find evidence of the City’s informal approval before work began. These 18 change orders amounted to \$389,561. Capital Works Delivery project managers informed us that some changes were pre-authorized as they were provisional items under \$25,000, and that work had proceeded without formal approval to minimize delays and additional costs. However, this practice is not consistent with the consultant’s contract terms with the City nor the Capital Works Delivery unit’s SOPs, which

state that work done under provisional allowance must be authorized through a change order (and a change directive if work begins before a change order). We noted nine of the 18 samples (50 per cent) related to provisional items. While provisional items were planned for under the project scope, there is limited quantity and budget allocated to each, therefore the City should still authorize and track the use and cost of these items. When a provisional item is exhausted, further use results in quantity overrun, which draws from the project's contingency allowance.

Excluding provisional items and quantity overruns from the 18 samples, there were still nine remaining samples amounting to \$236,683, where we were unable to verify whether City approval or knowledge existed before work was performed, due to the absence of change directive forms.

- For example, in one of the nine samples, the consultant submitted a change order on March 3, 2025 for extra work done between November and December 2024, where an additional bypass system was needed due to unforeseen site conditions. Related email correspondence was only between the contractor and consultant, and showed that the consultant authorized the extra work billing on time and material basis, amounting to \$43,139. There was no evidence of City approval or knowledge.

No training or refreshers on Capital Works Delivery unit's SOPs or manual

We also noted that there was no training or refreshers provided on the Capital Works Delivery unit's SOPs or manual, which would educate project managers on City requirements. While it is important to ensure projects are meeting deadlines and avoiding potential contractor delay claims, the City's change directive procedures should still be followed to ensure adequate documentation and budget control.

Recommendation:

- 4. City Council request the General Manager, Toronto Water, to:**
 - a. Require consultants to use the City's standard change directive form before extra work begins, as required by the City's policies and procedures; and**
 - b. Provide annual training or refreshers to project managers on Capital Works Delivery's Standard Operating Procedures and the manual.**

B. 3. Need to Ensure Change Orders Are Properly Supported and Timely

While **Section B.2.** identified cases where change directives were not formally approved by the City before the work was performed, all 35 change orders we reviewed were authorized by the appropriate signing authority within Toronto Water. However, we found the following areas required improvements to the reviews performed by consultants and project managers:

Change Orders Approved Without Being Properly Supported

57% of approved change order samples lacked required documentation

We noted that 20 of 35 change order samples (57 per cent) lacked certain required documentation, such as rationale for the change request, a breakdown of lump-sum charges, and the Change Order Summary, which lists all change orders to date for each contract. For completed work, documents such as the consultant's Daily Inspection Report were often not included.

The documentation accompanying the change order form did not always contain sufficient details from the consultant and Toronto Water to explain why the change was needed, whether the price was fair, or how the change affected the construction schedule.

- For example, a consultant claimed an additional \$95,191 for reviewing and responding to “numerous” claims and notices from the contractor. However, the contract clearly states that reviewing claims from the contractor is part of the consultant's original scope of work. Despite this, the consultant was compensated for this work through three change orders. The rationale for the decision to compensate the consultant was not documented.

Sixteen out of 35 (45 per cent) change order samples were for work charged in lump-sum prices. We found five out of the 16 (31 per cent) lacked sufficient detail supporting the lump-sum costs.

- For example, there was a change order for \$14,100 and the supporting package included a lump-sum quote. However, there was no detailed breakdown of the lump-sum quote, or analysis by the consultant to deem the quote reasonable. Toronto Water informed us that the consultant did perform analysis of the quote, however it was not included in the change order package.
- A different change order included a \$42,535 lump-sum quote for a new manhole installation, however no breakdown of the quote was included. While the consultant recommending the change order found the quote reasonable compared to recent bids for similar work, they did not provide supporting evidence.

Without supporting documents, Toronto Water cannot assess if change orders are reasonable

The contracts we reviewed required contractors to provide written quotes identifying each amount to be charged by the contractor, subcontractors, suppliers, and sub-subcontractors, including a detailed breakdown of costs for transportation, labour, products, equipment, etc. Without this quote breakdown and supporting evidence from consultants, Toronto Water cannot assess whether prices are reasonable or if the consultant properly reviewed and verified the quote.

We also noted in a few cases, change order documentation does not clearly indicate when and where provisional items were used. There is also no evidence that the consultant questioned or sought additional information from the contractor, making it difficult for the City to assess whether additional provisional item quantities are reasonable.

More Timely Change Order Submissions Needed

City received some change order packages several months to over a year after work was complete

While the contract for contractors requires submission of change order requests within 10 days, the consultant contract does not specify the number of days for the consultant to process a change order. However, the consultant contract does state that change orders with all backup documentation must be processed as soon as practicable to allow for timely contractor payment. As discussed in the previous section, 23 of 35 change order samples had work performed before a change order was issued. In five of these samples, we observed delays of several months, and in two other samples, the City did not receive a change order package until over a year after the work was completed.

When work is time-sensitive, sometimes approvals through change directives (see **Section B.2**) are provided to contractors to proceed with changes to contract scope before issuing a change order. In these cases, it becomes increasingly difficult to verify work if there are significant delays between the work done and the submission of the change order package.

Recommendation:

- 5. City Council request the General Manager, Toronto Water, to:**
- a. Ensure consultants include all supporting documentation as required for review when submitting change order packages;**
 - b. Ensure consultants follow up with contractors when the contractual deadline to submit change order request is exceeded;**
 - c. Set an appropriate timeline for consultants to review and prepare change order packages for approval and ensure Capital Works Delivery project managers follow up with consultants when the timeline is exceeded; and**
 - d. Review consultants' work more thoroughly on a sample basis to ensure quality of consultants' review and communicate the results in consultants' performance evaluations.**

B. 4. Change Orders Can Be Better Analyzed and Tracked

We found that the lack of a robust project management system and in-depth data analyses limits the Capital Works Delivery unit's ability to assess performance, identify systemic issues across projects, and plan effectively.

Current System Has Limited Data Analytic Functionality

No centralized way to track change orders limits the ability to analyze data and trends

The Capital Works Delivery unit does not have a centralized way to track change orders and relies on consultants to manually maintain a Change Order Summary for each contract. The Change Order Summary typically lists a contract's change orders to date, and describes each change order, including comments and approval date. However, information related to the category of change order (i.e., nature of the change), and who should be held accountable for the delay, is not easily accessible. This information is buried in individual change order packages, limiting the Capital Works Delivery unit's ability to perform data and trend analysis.

While consultants are required to log change orders in the City's Project Tracking Portal system, the system lacks data fields or functionality to capture this additional information. KPMG's 2025 Capital Delivery Review report noted that the Engineering and Construction Services Division is in the process of implementing a new

project management information system, Trimble Unity Construct. Toronto Water staff advised that adopting a new system would help strengthen project monitoring and oversight through enhanced analytics features.

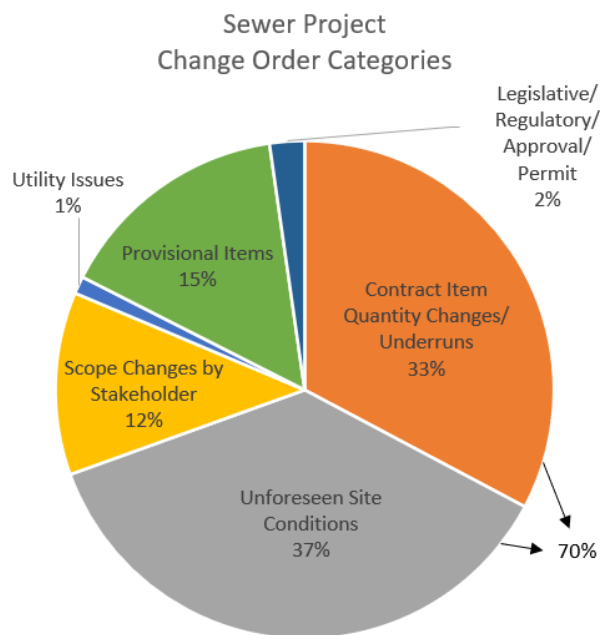
Insufficient Data Analysis to Inform Lessons Learned

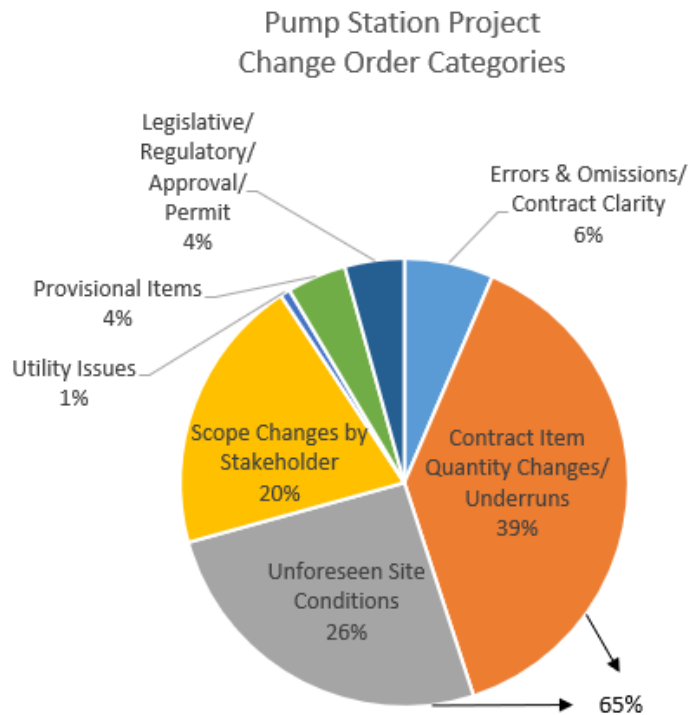
Analyzing change orders provides useful information to better monitor and plan the scope, budget and schedule for current and future projects. However, due to the lack of a robust project management information system, the Capital Works Delivery unit has not adequately analyzed change order data.

Reason for many change orders categorized as “unforeseen site conditions”

We reviewed the categories for all change orders in the five project samples and noted that for the sewer and pump station projects, “unforeseen site conditions” and “contract item quantity changes/ underruns” accounted for 70 per cent and 65 per cent of change orders, respectively. Similarly, for the forcemain project, “unforeseen site conditions” accounted for 84 per cent of change orders. See **Figure 6** below for details.

Figure 6: Change Order Categories for Sewer and Pump Station Projects
Prepared by the Auditor General’s Office





Note: For one of three sewer projects included in the chart, we only analyzed change orders from one phase as the previous consultant was not required to categorize change orders in the other two phases.

While unforeseen site conditions are not unusual for these types of projects, a high number of change orders could indicate a need to better consider commonly recurring issues during the project planning phase. Analyzing change orders may also allow project teams to better plan and include additional provisional items to account for potential risks or uncertainties in future projects. For example:

Better planning for provisional items could potentially allow for better pricing

- **Concrete debris removal** – Contractors sometimes had to use specialized equipment, outside of the contract's base scope, to remove concrete debris. The need to remove concrete debris and use special equipment could have been anticipated based on past project experience. Planning for these as provisional items in the contract could potentially allow for better pricing instead of being charged a lump-sum or for time and material through an unexpected change order.

The City database (T.O.INview) is used to identify potential conflicts but is not fully reliable

- **Conflicts with other capital asset work in the City** – Before construction, Toronto Water, consultants, and contractors review the City database (T.O.INview) to identify any potential conflicts. However, the Capital Works Delivery unit staff advised us that the City database is not fully reliable, as it does not capture third-party stakeholders (e.g., private developments, emergency or short-term road work,

street/sidewalk closures) or consistent real-time updates. Without complete and timely data, advance planning and effective coordination become difficult, indicating a need to improve the requirements and process for updating the shared City database.

Collaboration with Transportation Services needed to improve the road permits process

- **Collaboration with Transportation Services in obtaining road permits** – Local sewer repair and rehabilitation work typically spans multiple locations across the City. Contractors must visit each location as many as four times at different project stages to document required rehabilitation work, but each visit takes two to five days to complete. It can be challenging for the contractor to secure priority or coordinate effectively when competing with other longer-term projects. Toronto Water should collaborate with Transportation Services to find a solution that makes the Capital Works Delivery unit's process in obtaining Road Disruption Activity Reporting System permits (road permits) easier and more efficient. Our June 2025 report on the *Audit of Transportation Services: Improving Utility Cut Permit and Inspection Processes*⁹, includes a recommendation to the General Manager, Transportation Services Division to establish a Memorandum of Understanding (MOU) with Toronto Water to clearly define their roles and responsibilities. Potential process improvements may be incorporated into the MOU.
- **Optimistic estimates of provisional items** – In one sewer project, many of the change orders we reviewed were related to hiring a Toronto Police paid duty officer for traffic control. Toronto Water and the consultant estimated 800 hours, while 1,389 hours were actually charged by the contractor. This indicates the quantity was underestimated by 74 per cent. In addition, we noted that the posted rate for a police constable on the Toronto Police Services website is currently \$94.50/hour plus a 15 per cent administrative fee, whereas the contractor charged the City \$220/hour. There is an opportunity for Toronto Water to explore other more economical arrangements for traffic control such as limiting contractor mark-ups for paid duty officers or considering private traffic control companies that offer lower rates.

⁹ [AGO Audit of Transportation Services: Improving Utility Cut Permit and Inspection Processes \(June 25, 2025\)](#)

Recommendations:

6. City Council request the City Manager to require all City Divisions to keep appropriate capital project information up-to-date in the City's T.O.INview database, and request relevant City Agencies and Corporations to reinforce or develop processes, to provide the City with timely and accurate capital project information to improve coordination among stakeholders.
7. City Council request the General Manager, Toronto Water, to:
 - a. Explore opportunities, in consultation with the City's Chief Technology Officer, to accelerate the implementation of Trimble Unity Construct, a new project management information system, to analyze change order categories and incorporate them into lessons learned to better monitor current and future projects; and
 - b. Enhance inter-divisional coordination, in consultation with the General Manager, Transportation Services Division, and implement improvements to the Road Disruption Activity Reporting System to support improved capital planning and delivery outcomes, including reducing delays of awarded construction contracts, through mechanisms such as multi-site permitting.

B. 5. Cumulative Mark-Up Charged by Contractor and Subcontractors on Change Orders Exceeded Contractual Limits

Mark-up on a change order is allowed to fairly compensate a contractor for any and all overhead, profit, incidental, and administrative costs related to a change in contract. This includes costs related to superintendence and supervision, shop drawing production, estimation, and coordinating work activities with other stakeholders. City contracts specify a ceiling for the total combined cumulative mark-up allowed for contractors, subcontractors, suppliers, and sub-subcontractors.

63% of sampled change orders in one project had mark-ups above the contractual limit, leading to overcharge

In one project, our analysis found that five out of eight (63 per cent) approved change order samples we reviewed exceeded the mark-up ceiling specified in the contract, resulting in a total overcharge of \$24,358. Specifically, in all five change orders we observed that:

- The contractor applied a 15 per cent mark-up on behalf of its subcontractors or suppliers in its quote to the City, even when the

subcontractor or supplier did not charge a mark-up or already included it in the lump-sum price.

- The contractor charged an additional 10 per cent mark-up, resulting in a combined 25 per cent mark-up. However, the contract term states that the cumulative mark-up for contractor, subcontractor, supplier, and sub-subcontractor is 10 per cent for first \$100,000, and five per cent for amounts greater than \$100,000.

An example of the above issues is shown in **Figure 7 and 8** below:

Figure 7: Sample Contractor Quote to the City

Source: Toronto Water

Description	Price
Subcontractor #1 - Labour and Material	20,048.00
Subcontractor #1 - 15% Subcontractor Mark-up	3,007.20
Subcontractor #2 - Labour and Material	12,427.00
Subcontractor #2 - 15% Subcontractor Mark-up	1,857.05
Subcontractor #3 - Labour	14,400.00
Subcontractor #3 - 15% Subcontractor Mark-up	2,160.00
Subcontractor #3 - Additional Labour	12,000.00
Subcontractor #3 - 15% Subcontractor Mark-up	1,800.00
Subcontractor #4 - Material	1,975.00
Subcontractor #4 - 15% Subcontractor Mark-up	296.25
Subtotal	69,970.50
Mark-up	
Contractor 10% Mark-up	6,085.00
Base Price	60,850.00
Percent	10%
Total	76,055.50

Mark-up from subcontractor (15%) and contractor (10%) added up to 25%, exceeding the 10% ceiling in the contract

The contractor applied a 15% mark-up even though the subcontractor's invoice included no mark-up as shown in Figure 8

Figure 8: Sample Subcontractor Invoice

Source: Toronto Water

Invoice

Subcontractor#3

BILL TO

DATE 07/24/2023 PLEASE PAY \$12,204.00 DUE DATE 08/23/2023

P.O.

SITE ADDRESS

ACTIVITY	QTY	RATE	TAX	AMOUNT
Cutting and Removal	5	2,400.00	HST ON	12,000.00
Holdback	1	-1,200.00	HST ON	-1,200.00
SUBTOTAL				10,800.00
HST (ON) @ 13%				1,404.00
TOTAL				12,204.00
TOTAL DUE				\$12,204.00

Completed July 2023

The subcontractor invoice did not include a 15% mark-up

TAX SUMMARY

RATE	TAX	NET
HST (ON) @ 13%	1,404.00	10,800.00

THANK YOU.

\$122,781 total mark-up overage for the pump station project

The consultant did not catch the mark-up overage, indicating their review requires improvement. Capital Works Delivery staff advised that the consultant did not catch these billing errors because they were referencing outdated rates in a superseded contract template. Additionally, Capital Works Delivery staff acknowledged that they need to clarify the mark-up provisions to the consultants, contractors, and subcontractors to ensure they do not misread or misunderstand mark-up limits or how mark-ups should be applied.

Based on Toronto Water's own review, the project's total mark-up overage was \$122,781. We did not identify similar issues in the other change order samples from the other four projects we reviewed. According to staff, Toronto Water has taken action to begin recovery of the mark-up overage.

Recommendation:

- 8. City Council request the General Manager, Toronto Water, to:**
- a. Ensure that the mark-up requirements are clearly communicated in the contract and clarified with the contractor and consultant at the start of the project;**
 - b. Assess whether mark-ups were correctly charged in accordance with contract terms for other change orders and identify any other projects that may be affected; and**
 - c. Strengthen the consultants and Capital Works Delivery project managers' review of mark-up on change orders to ensure compliance with the contract terms.**

B. 6. Exceptions Approved for Price Escalation; Need Guidance to Manage Price Volatility

A price escalation or adjustment mechanism is a set of contractual provisions that allows the contract price to be adjusted over time. This is due to specific cost changes beyond the control of the project stakeholders, such as fluctuations in material and labour costs, tariffs, and inflation. It protects vendors from cost inflation and reduces the risks of cost renegotiation or disputes for the City.

Vendor was compensated \$442K due to price escalation - despite the project contract not including a price adjustment mechanism

In one of the five projects we reviewed, although the contract expressly stated that no price adjustments due to inflation or currency fluctuation were allowed, we found 13 change orders totaling \$442,712 were approved to compensate the contractor for price adjustments on materials and supplies. The contingency amount built into this contract was exhausted, and the Division's staff report requested a \$1.1 million increase to the purchase order to account for

price escalation and other changes was approved by the General Government Committee.¹⁰

These exceptions were granted due to significant price increases in the construction industry due to the COVID-19 pandemic and several other world events impacting the supply chain. The project team did not consider including a price adjustment mechanism at the time of tender due to its limited experience managing contracts covering multiple locations, and project timelines were extended due to delays. Including such a mechanism helps protect project stakeholders from cost volatility and may encourage vendors to bid more reasonably, knowing that future price risks are covered.

PMMD leads a working group to address price volatility

Our review found that the City's contract template does not include a standard price adjustment clause, leaving the decision on whether to include one with Division staff. In three other contracts we reviewed, price adjustment mechanisms were included and linked to Statistics Canada cost indices. Toronto Water staff advised that the Division participates in a multi-divisional working group led by the Purchasing & Materials Management Division (PMMD) to establish a City-wide pricing volatility adjustment approach for capital construction projects. This working group will implement new contract clauses in City's construction agreements for capital construction projects to manage material price volatility (escalation/de-escalation).

Going forward, the Capital Works Delivery unit should consider establishing guidelines and training to help staff determine how to tailor price escalation clauses in their contracts and what limits to set on allowable price adjustments to minimize exposure to price risks. This is particularly relevant for multi-year projects with significant materials subject to market fluctuations.

Recommendation:

- 9. City Council request the General Manager, Toronto Water, in consultation with Legal Services, Purchasing & Materials Management Division, and Engineering and Construction Services, to review and assess the need to update City policies and procedures and training to provide guidance to project managers on when to consider adding a price adjustment mechanism in contracts for the projects they manage.**

¹⁰ [February 25, 2025 General Government Committee decision](#)

C. Implementing Better Performance Management for Consultants and Contractors

Our audit found that improved performance monitoring is needed to ensure consultants and contractors are effectively managed and that their work meets the expected outcomes, and terms and conditions defined in the contracts.

C. 1. Strengthening Controls Over Daily Inspection Reports

Inspection records did not include required information and were not always retained

Our review of the five project samples found that some inspection records did not include required information and sign-offs, and were not always retained by Toronto Water.

A significant portion of the consultant's contract value is the inclusion of at least one full-time inspector and site inspection services during the construction and post-construction phases. The inspector's role is to ensure that infrastructure is constructed properly and in accordance with the contract.

During the construction phase, the inspector is required to prepare a Daily Inspection Report documenting the contractor's work at the project site. The inspection records should provide enough detailed information for a reviewer to clearly understand the specific tasks completed, and any significant events or issues that occurred on a given day, so that the City can manage any contractor claims, safety issues, or public complaints.

Exhibit 3 is a Daily Inspection Report template, which is used to verify contractor progress payments and validate the work performed for change orders.

Inspection Records Contain Incomplete Information

We reviewed the inspection records for five projects prepared by three different consultants. We noted that the report format and content were not consistent among the consultants, or consistent with the City's standard template to document site inspections, resulting in incomplete records.

For example, one consultant did not use the City's template and did not capture key information required by the manual such as:

- heavy equipment and tools on site;
- work performed by company and trades, and start and end time;
- digital photos of work in progress;
- testing results for material testing and equipment installation; and
- a record of site visitors.

One project we reviewed had seven different work locations, but only contained a single entry recording the inspection results for all locations visited. For example, the site diary did not provide detailed information related to inspector arrival and departure times, and observations were often very brief and did not adequately describe specific contractor or subcontractor activities. This does not comply with the City's requirements for documenting each work location in separate entries. Although the projects for two out of seven locations reached substantial performance, and progress was discussed during project meetings, it is important to maintain detailed documentation of site activities. Detailed inspection reports for each site help confirm work progress and can serve as supporting evidence in case of disputes, public complaints, delays, safety issues, or contractor claims.

Missing Sign-off on Daily Inspection Reports

Inspection records were not consistently signed by inspectors or contractors

Inspection records were not consistently signed by inspectors or co-signed by the contractor, as required under the manual. Specifically, our review of the five projects found:

- On one project, the site diary did not include a field to identify the name of the inspector, and the log was not signed by the inspector or the contractor.
- Another project did not have the contractor's signoff for 20 out of the 28 Daily Inspection Reports we randomly selected for review.

The manual requires that both the inspector and contractor sign the Daily Inspection Reports to confirm that mutually agreed upon work was performed. Signing the Daily Inspection Reports also identifies who was responsible for observations and work performed, serving as formal documentation in the event of contractual disagreements, delays, or legal claims.

Inspection Records Not Consistently Submitted or Retained

Although the contracts specify that consultants must submit weekly inspection records for sewer projects, and monthly for forcemain and pump station projects, these inspection records were not readily available when we requested them, or properly saved on the Toronto Water content server. When we eventually obtained the inspection records upon request, we found that they were not consistently attached to each progress payment or change order we reviewed. In addition, Capital Works Delivery staff do not regularly monitor the submission and receipt of inspection records from consultants. Staff informed us that they do not routinely request inspection records from consultants, indicating that they rely on consultants to retain and manage the records on their own. Keeping inspection records is an

important requirement in consultant contracts. Capital Works Delivery staff's regular recordkeeping and checks will help encourage consultants to exercise the right amount of diligence, and enable the timely identification and resolution of any issues or discrepancies.

Impact of Deficient Inspection Records

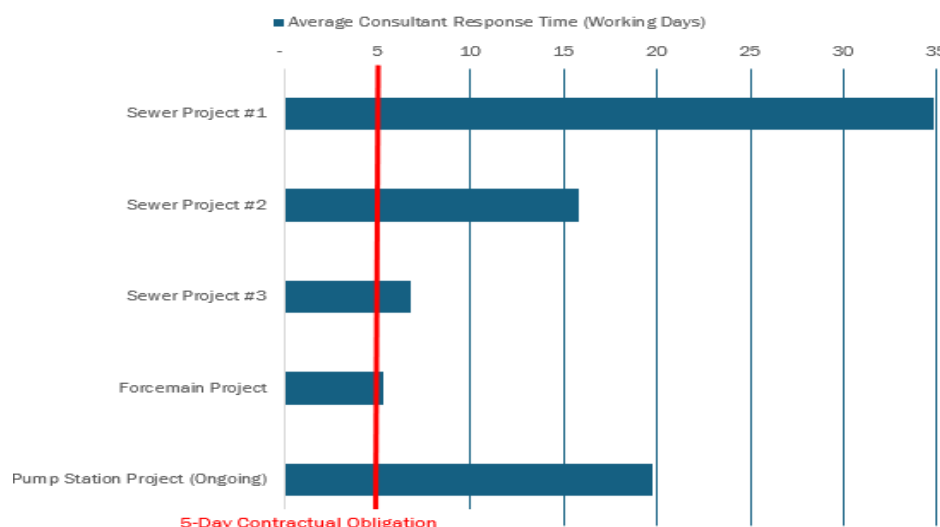
Deficient inspection records are partly due to requirements not being clearly or consistently defined in the consultant's scope of work and deliverables in the contract or adequately monitored and enforced. However, the inspection records serve as a key control for monitoring contractor work, and support the consultants' hours spent on site inspection, acting as backup documentation for verifying consultant invoices. A lack of thorough, complete and reliable inspection records risks that progress payments from contractors and consultants may go unverified, leading to billing discrepancies. Additionally, work performed that does not adhere to the City's specification and contract requirements may affect the quality and timeliness of a project. Inadequate tracking of contractor activities can hinder accountability, performance evaluations, and lead to repeated errors.

C. 2. Improving Timeliness of Consultant Responses

Consultants took 5 to 35 days (on average) to answer contractor requests, exceeding contractual response obligation

We observed that consultants were unable to meet the required timelines in responding to Request for Information (RFIs) from contractors. For example, City contracts require consultants to respond to RFIs within five working days of receipt and maintain a log of RFIs. The average consultant response time ranged from five to 35 working days as shown in **Figure 9**. This response time exceeded the required five working days for the majority of the RFIs (64 to 79 per cent) in three of the sampled projects, and the other two projects (36 to 38 per cent) still required improvement. In 10 extreme cases, consultants took more than four months to respond to RFIs.

Figure 9: Average Consultant Response Time to Contractor RFI by Project
Prepared by the Auditor General's Office



For one project we reviewed, the contractor claimed delay expenses, citing delays caused by the consultant and Toronto Water, including untimely response to RFIs. Delays could often be attributed to project complexity and contractor performance, and these claims are still under dispute between the City and the contractor with the final amount yet to be determined. However, they highlight a need for increased oversight and more effective mechanisms to hold consultants accountable to contractual obligations.

C. 3. Incomplete Backup for Progress Payment

Progress payments are partial payments made during a project for work completed to date. Contractors and consultants are required to submit a formal invoice to Toronto Water to request payment, supported by any necessary documentation. City contracts outline specific requirements for what must be included in the invoice. Consultants are responsible for reviewing both the contractor's work and submitted invoice for accuracy before recommending it to Toronto Water for payment approval.

91% of sampled progress payments did not have all required supporting documentation

We reviewed a sample of 35 progress payments and noted that while all 35 progress payment samples had proper authorization, 32 out of 35 samples (91 per cent) did not have all the required supporting documentation. See **Audit Objectives, Scope and Methodology Section** for an overview of our sampling methodology.

The contractor's daily work records were missing from the majority of the samples. In other instances, approved change order packages, Workplace Safety and Insurance Board (WSIB) certificates, or statutory declarations were also not included.

- Toronto Water staff explained that although including the contractor's daily work record is a contractual requirement for invoicing, they rely on consultants' inspectors to verify completed work on site and to reconcile discrepancies between consultants' inspection records and contractors' billing. However, as discussed in **Section C.1**, we found that consultants' own inspection records were often incomplete.
- Change orders must be approved before processing progress payments to ensure that any contract changes to scope, cost, and timeline are formally authorized and documented. An approved change order prevents disputes over extra work efforts and costs.
- Including WSIB certificates and statutory declarations are contractual requirements to support formal invoices. They protect the City by ensuring that contractors pay their subcontractors and insure their workers in the event of workplace safety incidents. Without them, the City may be exposed to significant legal and financial risks.

The absence of other required invoice supporting documents may also indicate that the consultant is not applying the appropriate level of scrutiny to review progress payments, or is not forwarding all documents to the City as required per contract requirements.

Recommendation:

10. City Council request the General Manager, Toronto Water, to:

- Clearly and consistently communicate inspection reporting requirements in the contracts and ensure they align with the manual;**
- Ensure consultants document their inspection in accordance with the manual;**
- Establish routine spot checks to ensure projects managed by the Capital Works Delivery unit are receiving adequate on-site inspection services from consultants, and that inspection records are complete, accurate, and regularly retained by City staff;**
- Strengthen Capital Works Delivery project manager oversight of consultant responses to Request for Information and other submissions to ensure timely responses to contractors; and**
- Ensure contractors and consultants provide all required documentation with their progress payment applications, in compliance with the contract requirements.**

C. 4. Contractor and Consultant Performance Evaluations

Minimum required number of performance evaluations for consultants and contractors not met

We noted that while Toronto Water conducted at least one interim consultant and contractor performance evaluation for each sampled project we reviewed, none met the minimum number required by PMMD.

For consultant contracts, a minimum of one interim and one final consultant performance evaluation are required for each project phase. Contractors with contracts over 12 months are subject to a mandatory performance evaluation at the end of the project, along with one mandatory interim evaluation each year.

Figure 10 below summarizes the expected number of performance evaluations to date versus the actual number of performance evaluations completed to date.

Figure 10: Expected versus Actual Number of Performance Evaluations Completed

Prepared by the Auditor General's Office

Capital Project	Contractor		Consultant	
	Expected # to date	Actual # to date	Expected # to date	Actual # to date
Sewers (3 sample projects)	9	6	7	2
Forcemain (1 sample project)	2	1	3	1
Pump station (1 sample project)	4	3	3	1

We noted that some performance evaluations in four sampled contracts were not performed in accordance with the required timelines. Untimely vendor performance evaluations diminish opportunities for timely feedback and improvement. For example:

- **Forcemain construction and consultant contracts** – the construction contract started in October 2023, and substantial performance was achieved in May 2025. Per PMMD requirements, there should have been two contractor performance evaluations, but only one was completed by February 2025. Issues noted by the project manager included not meeting project schedules, high quotes on change orders with reluctance to negotiate, and a lack of proposed solutions when issues arise. Similarly, there should have been three consultant performance evaluations, but only one was completed in May 2025 after the substantial performance date.
- **Pump station consultant contract** – the contract began in June 2016, and the only interim consultant performance evaluation was completed almost nine years later in May 2025, after the start of our audit.

Performance evaluations had some areas with repeated low scores

While Toronto Water staff informed us that the results of the performance evaluations were discussed during bi-weekly progress meetings, we noted repeated low scores in some areas. The ratings for the completed evaluations averaged about three out of a score of five, meaning vendors “Met Expectations” overall. However, most evaluations had some items under “Improvement Needed”. Once issues were communicated to vendors, we noted that vendors did not prepare any corrective action plans to address areas needing improvement, leading to repeated low scores in these areas in subsequent evaluations.

- For example, one sewer project we reviewed had an interim evaluation with low ratings for not being on schedule, not having effective quality control, not promptly correcting defective work, and not providing competitive change order pricing. Subsequently, in its second interim evaluation a year later, similar performance issues were identified.
- In another sewer example, we noted the first interim evaluation had issues with the contractor submitting inaccurate and untimely schedule updates, and ineffective coordination and management of subcontractor work. The final evaluation noted the same recurring issues, and that these issues were brought up in numerous progress meetings but were not addressed.

As discussed in KPMG’s 2025 Capital Delivery Review report, performance evaluation scores can be better incorporated into future procurement processes and decisions. Past vendor performance data could be used as a weighted criterion in bid evaluations for new contracts. This way, vendors may be more likely to take corrective action for any improvement areas identified in their performance evaluations.¹¹

We noted that some of Engineering and Construction Services and Toronto Water’s construction work utilizes City inspectors and contract management services instead of outsourcing it to a third-party consultant. Given the issues outlined in **Section C**, it is worthwhile for Toronto Water to consider and evaluate whether the cost and benefit of employing in-house staff outweighs that of retaining and overseeing consultants to manage its contracts.

¹¹ PMMD issues a warning letter to vendors with a performance score below 50 per cent, and may suspend vendors with a score below 40 per cent, or with two evaluation scores below 50 per cent.

Recommendation:

- 11. City Council request the General Manager, Toronto Water, to:**
- a. Ensure the project managers complete contractors' and consultants' performance evaluations in accordance with the contract and City policies and procedures;**
 - b. Clarify with consultants the number and frequency of contractors' performance evaluations required;**
 - c. Explore opportunities to incorporate the evaluation scores of consultants and contractors into future bid evaluations, in consultation with the Chief Procurement Officer and Legal Services; and**
 - d. Conduct a cost and benefit analysis to assess the optimal balance between using consultants and in-house staff for certain site inspection and contract administrative activities.**

C.5. Key Performance Indicators (KPIs)

While the Capital Works Delivery unit delegates some oversight responsibilities to external consultants, Toronto Water, as the project owner, remains ultimately accountable for project outcomes. We found that Toronto Water currently has limited performance measures in place to drive and monitor performance for consultants, contractors, and the overall SOGR program.

Lack of Performance Indicators to Monitor and Incentivize Consultant and Contractor Performance

Consultant contracts do not include performance indicators to promote proactive project management and oversight

We found that consultant contracts do not include key performance indicators (KPIs) to promote proactive project management and oversight. The consultant contracts outline general requirements and the consultant's responsibilities related to budget and schedule control. However, without specific performance indicators to encourage adherence to the project budget and schedule, it is difficult to assess whether a consultant effectively performs these contractual responsibilities.

As discussed in earlier sections, we identified several areas where it is unclear whether consultants exercised sufficient scrutiny in administering the construction contracts on the City's behalf. Establishing clear KPIs with defined performance targets, monitoring progress, and linking results to consultant evaluations could help encourage desired performance. Additionally, providing performance expectations in advance may help consultants during the bidding

process to better understand what is needed to meet project demands.

KPMG's 2025 Capital Delivery Review report already noted that City contracts for contractors typically only use liquidated damages as the lever to motivate contractor performance, which was noted by both the City and external stakeholders to be ineffective. As recommended in the KPMG report, Toronto Water should explore schedule or quality-based performance indicators such as milestone achievement rates, delay duration in days, and inspection pass rates to encourage better contractor performance.

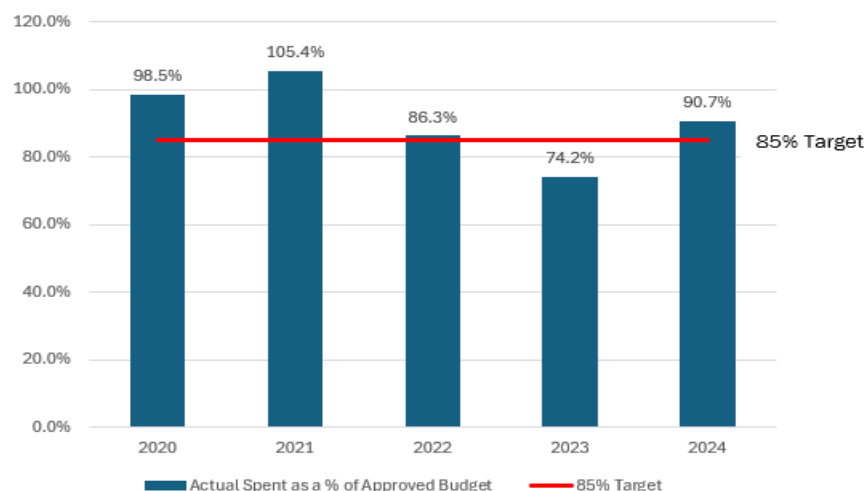
Capital Works Delivery Could Benefit from More Program-Wide Performance Measures

Capital Works Delivery unit could benefit from establishing and monitoring more internal performance measures and desired outcomes at a program-wide level

We found that the Capital Works Delivery unit could benefit from establishing and monitoring more internal performance measures and desired outcomes at a program-wide level. KPIs related to cost and schedule management, such as change orders as a percentage of contract price, and days delayed, are only available within individual project summaries, making it difficult to assess overall SOGR program performance. Useful KPIs such as percentage of contracts with formal disputes, or claims and number of defects after warranty expiration, are not regularly monitored.

Currently, Capital Works Delivery tracks two key performance indicators at a program-wide level, focused on the program's actual expenditure as a percentage of planned expenditure and approved annual budget. As illustrated in **Figure 11** below, except in 2023, Capital Works Delivery has consistently met or exceeded its target of delivering 85 per cent of its approved annual budget for the past five years. As outlined in **Section B.1.**, 16 of the 18 projects completed over past five years were managed within budget, when considering the contingency allowances built into the projects.

Figure 11: Actual Expenditures as a Percentage of Approved Annual Budget
Prepared by the Auditor General's Office



To help foster a contract management culture focused on managing project cost and timeliness, leadership should clearly communicate desired outcomes such as making sure projects are on time and on budget, while minimizing the number of change orders. This will help influence staff's approach to contract management.

Collaboration with other Toronto Water business units responsible for capital planning and operations may also help in developing KPIs that are relevant and aligned with project objectives, as these units are responsible for developing business cases and approving the project charter to ensure that outcomes deliver value for money.

Recommendation:

12. City Council request the General Manager, Toronto Water, to:

- a. Consider developing additional key performance indicators and incorporating them into contracts to establish performance standards for both consultants and contractors to encourage their performance, in consultation with Purchasing & Materials Management Division, Strategic Capital Coordination Office, and Engineering and Construction Services; and
- b. Develop and monitor key performance indicators (KPIs) at the program level for the Capital Works Delivery unit, including KPIs that focus on change order and schedule management, and client unit satisfaction.

Conclusion

Maintaining the City's sewer systems in a state of good repair is essential for maximizing return on assets and providing reliable sewer services to Toronto residents and businesses. Successful management and administration of Toronto Water's consulting and construction contracts will help ensure stormwater and wastewater asset repair, rehabilitation, and replacement projects are executed in accordance with the agreed contract terms, timelines, and budgets.

Overall, Toronto Water must strengthen accountability and oversight of contractors and consultants to ensure timely project delivery, and confirm all contract changes are adequately supported, diligently reviewed, and approved. This means ensuring consultants adequately scrutinize contract changes and progress payments before recommending approval. Better tracking, monitoring, and analyzing of change orders may help inform management decisions, and better plan the scope, budget and schedule for current and future projects. There is also a need to improve inter-divisional coordination as some change orders and project delays were due to conflicts with other capital asset work in the City. Furthermore, enhanced performance evaluations and monitoring will support more effective contract management going forward.

Specifically, for our first audit objective, to assess whether Toronto Water's contract management oversight ensures consultant and contractor work meets expected outcomes and terms and conditions of the contracts, we found that state-of-good-repair stormwater and wastewater projects for local sewers, forcemains and pump stations are mostly delivered within budget (which includes provisional and contingency allowances). However, we found that these projects are often delayed, which can potentially have an effect on local communities, the environment, and cost to the City. Toronto Water also needs to improve its consultant oversight to ensure time extension requests, liquidated damages assessments, and response times to contractors comply with contractual and City requirements. In addition, we noted Toronto Water and its consultants did not always follow the City's change directives and change order processes, leading to some work done without City approval or knowledge, and a lack of supporting documentation.

For our second audit objective, we found that contract payments were mostly accurate and authorized. However, they lacked sufficient documentation in accordance with the City's policies and procedures, such as complete inspection forms and contractors' daily work records.

12 recommendations to improve stormwater and wastewater contract management processes

In our view, implementing the 12 recommendations contained in this report will help Toronto Water improve the efficiency and effectiveness of its contract management oversight of state-of-good-repair projects. In particular, the recommendations identify opportunities for:

- clarifying consultants' scope of work and deliverables in the contract, and City policies and procedures, to provide clearer guidance to staff and vendors on time extension requests, liquidated damages, change directives, change orders, inspection records and progress payments;
- greater staff oversight of consultants and strengthening performance evaluation processes to ensure consultants sufficiently review contractor performance and follow contractual requirements and City policies and procedures;
- analyzing change order root causes and trends to improve monitoring and management of project budget and schedule; and
- coordinating with other City Divisions, Agencies and Corporations to improve city-wide capital project information flow, standard contract clauses, and key performance indicators.

While this audit focused on the state-of-good-repair projects specifically for sewers, forcemains and pump stations, many of our recommendations can also be applied in managing other capital projects at Toronto Water.

Thank you to management and staff

We would like to express our sincere appreciation for the co-operation and assistance we received during our audit from Toronto Water management and staff.

Audit Objective, Scope, and Methodology

Audit included in the 2025 Work Plan

The Auditor General's 2025 Work Plan included an audit of Toronto Water's stormwater asset management program. In planning for this audit, we included wastewater assets as Toronto Water does not categorize their contracts by flow (i.e., drinking vs. waste vs. stormwater), but rather by asset type. For example, reviewing sewer projects would cover both stormwater and wastewater sewers.

Audit objective

The objective of this audit was to assess whether Toronto Water has systems and processes in place to ensure that state-of-good-repair stormwater and wastewater projects for local sewers, forcemains and pump stations are delivered in accordance with the expected outcomes and terms and conditions defined in these contracts, as well as the City's policies and procedures. This audit aims to answer the following questions:

- 1) Does Toronto Water's contract management oversight ensure the work of consultants and contracts meets the expected outcomes and terms and conditions defined in the contracts?
- 2) Are contract payments supported, accurate, and authorized by Toronto Water in accordance with the City's policies and procedures?

Work on Internal Control

For this audit, we determined that internal control is significant within the context of our audit objectives. There are five components of internal control: control environment, risk assessment, control activities, information and communication, and monitoring. Among these, we identified the following control components, and their underlying principles are significant to our audit objectives:

Control Components	Underlying Principles
Control activities	• Selects and develops control activities • Deploys control activities through policies and procedures
Monitoring activities	• Conducts ongoing and/or separate evaluations • Evaluates and communicates deficiencies

Specifically, our scope of work on internal control focused on assessing the design, implementation, and operating effectiveness of the following key control activities.

- Toronto Water and external consultants':
 - review and authorization of contract changes, including time extension requests, change directives, and change orders
 - review and authorization of progress payments
 - oversight of contractors and construction activities, including daily inspection reporting and responses to requests for information
 - review to certify substantial completion of construction
 - review of warranty administration
- Toronto Water's evaluation of consultant and contractor performance
- Toronto Water's monitoring of key performance indicators for consultant, contractor, and Capital Works Delivery

Any control deficiencies identified in the key control activities listed above are included in our audit report.

Audit scope

The scope of this audit covered the five-year period from January 1, 2020 to March 31, 2025. Where relevant to our audit, we examined certain records and data outside this period. Our findings and conclusions are based on the information and data provided by Toronto Water at the time the audit was completed.

Areas not covered within the scope of this audit

This audit did not review Toronto Water's contract management processes for stormwater and wastewater project emergency repairs, which are performed by Toronto Water's operational team. This audit also did not review new capital stormwater and wastewater projects covered by Toronto Water's infrastructure team, such as those under the Basement Flooding Protection Program. Complex repairs, rehabilitation, and replacement projects for trunk sewers are delivered by a separate City Division, Engineering and Construction Services, using external contractors. This is not covered within the scope of this audit.

Audit methodology

Our audit methodology included:

- Reviewing Toronto Water's policies and procedures, and any other relevant internal guidelines;
- Reviewing Toronto Water budget information, strategic plans, and internal and external reviews;
- Conducting site visits of Toronto Water offices, yards, and pump stations;

- Interviewing staff from various business units, including project managers, and staff from the operations and infrastructure planning teams;
- Analyzing high-level data related to projects managed by the Capital Works Delivery unit between January 1, 2020 and March 31, 2025;
- Selecting sample projects for detailed review based on identified risks;
- Reviewing samples of time extension requests, change orders, progress payments associated with the sampled projects, along with other supporting documentation where applicable;
- Retaining an expert to review selected samples; and
- Conducting other procedures that were deemed relevant.

Sampling methodology

Between January 2020 and March 2025, the Capital Works Delivery unit oversaw 29 construction and eight consulting contracts related to sewer, forcemain and pump station SOGR projects, totalling approximately \$271 million and \$46 million, respectively.

Of the 29 SOGR projects, 18 were completed and 11 are still ongoing. For this audit, we judgmentally selected five SOGR projects based on identified risks for detailed review. Samples were selected based on factors such as contract value, project risk, time of construction, coverage of vendor, and city geographic area. The audit team performed the following:

- analyzing project specific contract change data
- reviewing project specific records, such as business cases, requests for proposal, contracts, Change Order Summaries, sewer CCTVs, consultants' daily inspection records, delay claims, progress meeting minutes, performance evaluation forms, etc.

See **Figure 12** below for details.

Figure 12: Overview of Projects Overseen by Capital Works Delivery (January 2020 - March 2025)
Prepared by the Auditor General's Office

Capital Project	Total # of Projects in the Population	# of Completed Projects	# of Ongoing Projects	Total # of Projects Sampled	# of Completed Projects Sampled	# of Ongoing Projects Sampled
Sewers	21	15	6	3	2	1
Forcemain	4	2	2	1	-	1
Pump station	4	1	3	1	-	1
Total	29	18	11	5	2	3

At the time of our audit, out of the five sample projects, four projects had reached substantial performance, and one project (pump station project) is still ongoing.

From these five projects, we randomly selected 12 samples of time extension requests, 35 samples of change orders, and 35 samples of progress payments for our audit testing. See **Figures 13, 14 and 15** below for a sample breakdown.

Figure 13: 12 Samples of Time Extension Requests Broken Down by Asset Type
Prepared by the Auditor General's Office

Capital Project	# of Time Extension Requests Sampled	Note
Sewers	9	
Forcemain	3	
Pump station	N/A	No time extension requests have been approved at the time of our testing
Total	12	

Figure 14: 35 Samples of Change Orders Broken Down by Asset Type
Prepared by the Auditor General's Office

Capital Project	# of Contractor Change Orders Sampled	# of Consultant Change Orders Sampled	Total # of Change Orders Sampled
Sewers	19	1	20
Forcemain	2	3	5
Pump station	8	2	10
Total	29	6	35

Figure 15: 35 Samples of Progress Payments Broken Down by Asset Type
 Prepared by the Auditor General's Office

Capital Project	# of Contractor Progress Payment Sampled	# of Consultant Progress Payment Sampled	Total # of Progress Payment Sampled
Sewers	17	3	20
Forcemain	4	2	6
Pump station	7	2	9
Total	28	7	35

**Compliance with generally
accepted government
auditing standards**

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

Exhibit 1: Glossary

Prepared by the Auditor General's Office

CCTV – Closed Circuit Television, where a camera mounted to a tractor or other mobile device physically travels through a pipe, allowing a contractor to record defects and features based on the type of observation and location within the pipe.

Change Directive – An order to the contractor to proceed with a change in the work, prior to or in the absence of the City and the contractor agreeing upon adjustments in the contract price and the contract time. The change directive is used to keep the project moving forward. A subsequent change order with cost and schedule impacts is issued once the work has commenced.

Change Order – Written amendments to the contract and are typically used for contingencies, change in the work, extra work, additional work, and obtaining credit for deleted scope.

Claim Notice – a notice in writing by the contractor to inform the City of a claim that the contractor is entitled to an increase in the contract price or a claim for an extension of the contract time and/or for compensation for a delay attributable to the City.

Contingency Allowance – A budgetary allowance intended to cover cost increases for the project.

Critical Path – Key milestones to be completed on time to avoid project delays.

Daily Inspection Report – A daily report for each workday at the project site. It should provide enough detailed information for a reviewer to clearly understand the specific tasks completed, and any significant events or issues that occurred on a given day, so that the City can manage any contractor claims or public complaints.

Date of Substantial Performance – The date the project achieved substantial completion, which has specific requirements set out in the *Construction Act*, including the project being ready for use.

Deliverable – A tangible or intangible product or service produced as a result of the project. Examples of deliverables include drawings, reports, and design documents.

Delay Claim – A type of claim notice where the contractor seeks compensation and/or a time extension due to delays on a construction project.

Forcemain – Pressurized sewer pipes that work in conjunction with pumping stations to carry flow from lower to higher elevations.

Liquidated Damages – A per-day, reasonable and genuine pre-estimate of the actual damage that will be incurred by the City if the contractor fails to achieve substantial performance as required.

Lump-sum – A single, pre-determined fixed price for work performed, regardless of the contractor's actual costs.

Mark-Up – A compensation to the contractor for any and all overhead, profit, incidental and administrative costs related to the change.

Pump Station – Facilities that pump flow through forcemain from lower to higher elevations.

Progress Payment – Payment to a vendor, typically made on a monthly basis, for work performed to date, in accordance with the contract.

Provisional Item/Allowance – Items of work that can be specified with enough detail at time of tender to request a price, but whether or not the item will actually be used or how much will be used is unknown. Work done under a Provisional Item/Sum/Allowance must be authorized through a Change Order.

Request for Information (RFI) – Used by contractors to clarify ambiguities, resolve missing information, or address conflicts in project documents, drawings, or specifications.

Road Disruption Activity Reporting System – An online booking system for the purposes of communicating and coordinating temporary closures of any sidewalks, bike lanes or roads.

Time Extension Request – A change order request for additional time extension beyond the contract completion date.

T.O.INview – City of Toronto Infrastructure Viewer, an interactive map that shows planned capital infrastructure, utilities, road, and TTC projects.

Exhibit 2: Process for Requesting Time Extensions

Time extensions to a contractual deadline are allowed and approved when delays beyond a contractor's control occur. **Figure 16** below shows the common situations where contract time extensions are allowed.

Figure 16: Common Situations Where Contract Time Extensions Are Allowed

Prepared by the Auditor General's Office



Contractors are required to submit a written time extension request to the consultant and the City as soon as they identify an event that may affect the project schedule. The request must include:

- Cause of project delay;
- Number of additional days required;
- Financial impact;
- Impact to meeting key project milestones (critical path);
- Updated project schedule with revised substantial performance date; and
- All supporting documentation to substantiate a change to project schedule.

Consultants are responsible for reviewing the contractors' time extension requests and must independently verify and assess the cause(s) of project delay against situations that are allowable under the contract. The consultant then provides a recommendation to Toronto Water whether to approve or reject the request. Toronto Water is also required to perform a secondary review before determining whether to approve the request through a change order.

Exhibit 3: Daily Inspection Report Template

Source: Toronto Water



Engineering & Construction Services

INSPECTOR'S DAILY REPORT

Report No.:	WDay No.:	Inspector:	Date:	Contract No.:
Location:			Project Engineer:	
Contractor:		Sub-Contractor:		
Weather (°C):	High:	Low:	Pay Duty Hours:	
Working Day? Yes ☐	Is Stat Holiday: ☐	Inspector's Time In:	Inspector's Time Out:	

LABOUR

EQUIPMENT

Number	Labour Duty	Hours	Total Hours	Qty	Model Spec	Hours	Total Hours

WORK VISITED BY

TEST TAKEN

Title	Visitor Name	Time In	Time Out	Test Type	Test Qty

MATERIALS

Item Description	Qty	Pay Item	Non Pay
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐
		☐	☐

CONTRACT ITEMS COMPLETED TODAY

1	Project Location	Today's Total	Total to Date
2	Project Location	Today's Total	Total to Date
3	Project Location	Today's Total	Total to Date
4	Project Location	Today's Total	Total to Date
5	Project Location	Today's Total	Total to Date

INSPECTOR'S DAILY REPORT

Signs And Barricades Checked AM: ☐ PM: ☐

Contractor's Time In: To

Field Instructions Prepared? ☐ Change Directive Prepared? ☐ Extra Work Report Prepared? ☐

REMARKS AND SUPPORTING DOCUMENTS REPORT

Measurements and Calculations

Item	Description	Desc / Calculations	Quantity	Total

Inspector's Signature

Report Checked By Engineer/Supervisor

Appendix 1: Management's Response to the Auditor General's Report Entitled: "Audit of Toronto Water: Stormwater and Wastewater Contract Management"

Recommendation 1: City Council request the General Manager, Toronto Water, to minimize project delays by actively monitoring, analyzing, and documenting the root causes and trends of delays.

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame: In some cases, Toronto Water may strategically and intentionally extend project schedules, such as for sewer relining contracts, to align with additional planned work, optimize operational efficiency, and minimize impacts to the public. However, other types of delays, arising from factors such as contractor performance, coordination with utilities, or unanticipated site conditions, should be systematically tracked and analyzed in alignment with best management practices. The City of Toronto is implementing Trimble Unity Construct, a cloud-based construction management platform used for capital project delivery and oversight. Toronto Water will submit a formal proposal to the City's Trimble Unity Construct project team to accelerate Toronto Water's implementation, and to develop a centralized delay tracking process for Toronto Water projects. Accelerating Toronto Water's implementation of Trimble Unity Construct will enable the Division to realize earlier benefits, including improved project oversight, enhanced data integration, and strengthened accountability across capital delivery functions. Early implementation will also support timely action on the Auditor General's recommendations and reduce reliance on temporary or ad hoc systems to address identified gaps. Timeline to completion: The General Manager, Toronto Water, will make a written submission to the Trimble Unity Construct project lead by Q1 2026 requesting the accelerated implementation of Trimble Unity Construct for Toronto Water and will work to define the Toronto Water functional requirements for consideration as the City enhances Trimble Unity Construct which will include delay tracking and analysis capability. If implementation cannot be accelerated, Toronto Water will develop an offline tracking database as an interim measure to monitor progress and maintain oversight until Trimble Unity Construct is in place by Q4 2026 .

Recommendation 2: City Council request the General Manager, Toronto Water, to:

- a. Clarify consultants' scope of work and deliverables in the contract, and City policies and procedures to provide clearer guidance on evaluating time extension requests, including requiring contractors to submit substantiating documentation, and requiring consultants to fully review and validate these requests through delay analysis before consideration by the Capital Works Delivery project manager; and

- b. Ensure that contractors attach all required documentation and consultants sufficiently document rationale to approve time extensions in accordance with the updated contract terms, City policies and procedures.

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame: Establishing a common, City-wide approach to providing clear and consistent guidance to consultants and contractors on standard contract management practices, documentation requirements, and approval processes helps ensure compliance with City policies and procedures while reducing confusion, particularly for those engaged in delivering projects for multiple city divisions. It is possible, for example, that a consultant or contractor may deliver water, wastewater and stormwater related projects for two different City divisions. The City's Enhancing Capital Construction Delivery Program is a corporate initiative led by Engineering and Construction Services. Its goal is to modernize how the City delivers capital construction projects by strengthening project management standards, improving contractor performance oversight, and ensuring better coordination and accountability across divisions and with external stakeholders. Any new work conducted by Toronto Water to standardize project management tools, templates, and practices should be done in alignment with this program. Toronto Water will work with Engineering and Construction Services, as part of the Enhancing Capital Construction Delivery Program to update standard contract language and related administrative procedures to clarify that incomplete time extension requests will not be accepted. Timeline to completion: The General Manager, Toronto Water, in consultation with the Executive Director, Engineering and Construction Services and through the Enhancing Capital Construction Delivery Program will update contract templates to clarify that incomplete change order requests will not be accepted by the City, by Q4 2027 . The Enhancing Capital Construction Delivery Program, approved by Council in April 2025, is currently being operationalized and will be implemented over the next two plus years through a phased, iterative approach.

Recommendation 3: City Council request the General Manager, Toronto Water, to:

- a. Ensure Capital Works Delivery project managers and external consultants follow City contract terms, policies, and procedures, relating to documenting the rationale for assessing or not assessing liquidated damages or delay claims; and
- b. Improve the tracking and reconciling of delay days, clearly identifying who is responsible for the delays, to support the enforcement of liquidated damages.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

Similar to Toronto Water's rationale for its management response for Recommendation 2, Toronto Water will collaborate with the Executive Director, Engineering and Construction Services, through the Enhancing Capital Construction Delivery Program to review and, where necessary, provide training, strengthen existing documentation and procedures to ensure project managers and external consultants understand requirements and expectations, have a clear and standardized method to assess, document, and track delay days and liquidated damages, promoting consistency in how City divisions document, monitor, and enforce liquidated damages contract terms.

Toronto Water will also explore and document system-based tracking capabilities of Trimble Unity Construct, to ensure that delay and liquidated damages information can be captured and monitored. Requirements identified through this review will be shared with the Trimble Unity Construct implementation lead.

Timeline to completion:

General Manager, Toronto Water, in collaboration with the Executive Director, Engineering and Construction Services, will, through the Enhancing Capital Construction Delivery Program review and enhance existing documentation and procedures, and define requirements for system-based tracking of delays and liquidated damages by **Q4 2027**.

The Enhancing Capital Construction Delivery Program, approved by Council in April 2025, is currently being operationalized and will be implemented over the next two plus years through a phased, iterative approach.

The General Manager, Toronto Water, will make a written submission to the Trimble Unity Construct project lead by **Q1 2026** requesting the accelerated implementation of Trimble Unity Construct for Toronto Water and will work to define the Toronto Water function requirements, which will include the functional requirements necessary to support the enforcement of liquidated damages.

General Manager Toronto Water will initiate the provision of various ad hoc training modules in **Q1 2026** to address some of the issues raised by the Auditor General in this report with the aim of reviewing, developing and finalizing a new Annualized Training Program by **Q4 2026**.

Recommendation 4: City Council request the General Manager, Toronto Water, to:

- a. **Require consultants to use the City's standard change directive form before extra work begins, as required by the City's policies and procedures; and**
- b. **Provide annual training or refreshers to project managers on Capital Works Delivery's Standard Operating Procedures and the manual.**

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame: Toronto Water, will review and update Capital Works Delivery's Standard Operating Procedures, associated manuals, templates, forms, and practice used by Toronto Water and consultants to ensure that appropriate processes are in place and communicated to manage changes during construction. This review will confirm alignment with relevant City policies and procedures governing change orders. As part of an internal quality assurance framework, Toronto Water will explore options for periodic spot audits to confirm procedures are being followed and documented appropriately. Toronto Water recognizes that some of its training practices have diminished since the pandemic and will renew its focus on staff training. The findings of this audit will help identify priority areas for improvement and inform the content and structure of future training initiatives. An annual training program will be developed to support sustained compliance and staff competency. Toronto Water commits to including training of all relevant policies, procedures required to manage change during construction. Timeline to completion: General Manager, Toronto Water will complete the review and update of guidance material to support changes during construction by Q4 2026. General Manager Toronto Water will initiate the provision of various ad hoc training modules in Q1 2026 to address some of the issues raised by the Auditor General in this report with the aim of reviewing, developing and finalizing a new Annualized Training Program by Q4 2026.

Recommendation 5: City Council request the General Manager, Toronto Water, to:

- a. **Ensure consultants include all supporting documentation as required for review when submitting change order packages;**
- b. **Ensure consultants follow up with contractors when the contractual deadline to submit change order request is exceeded;**
- c. **Set an appropriate timeline for consultants to review and prepare change order packages for approval and ensure Capital Works Delivery project managers follow up with consultants when the timeline is exceeded; and**
- d. **Review consultants' work more thoroughly on a sample basis to ensure quality of consultants' review and communicate the results in consultants' performance evaluations.**

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame:
Similar to Toronto Water's response to Recommendation 2, Toronto Water, will work with Engineering and Construction Services as part of the Enhancing Capital Construction Delivery Program to update standard contract language and related administrative procedures to clarify that incomplete change order requests will not be accepted. Similar to Toronto Water's response to Recommendation 4. Toronto Water projects vary in size, scope, and complexity, and project managers are required to use professional judgment when setting appropriate timelines for contractor change order submissions. This has resulted in inconsistencies across Capital Works Delivery projects. To address this, Toronto Water will develop and implement annual training program for Capital Works Delivery project managers that will include guidance to support Project Managers applying consistent standards for timeliness and documentation completeness. Toronto Water will implement a quality assurance framework, including periodic spot checks, to confirm that required documentation is complete, accurate, and aligned with policies, procedures and practice. Timeline to completion: The General Manager, Toronto Water, in consultation with the Executive Director, Engineering and Construction Services and through the Enhancing Capital Delivery Program will update contract templates to clarify that incomplete change order requests will not be accepted by the City. The timing for this work will be identified as part of the program's implementation plan, the development of which is a key early priority for the program team. As of October 2025, the program has commenced its two-year rollout. The General Manager, Toronto Water will initiate the provision of various ad hoc training modules in Q1 2026 to address some of the issues raised by the Auditor General in this report with the aim of reviewing, developing and finalizing a new Annualized Training Program by Q4 2026. The General manager, Toronto Water will implement a quality assurance framework to guide the review of adherence to policies, procedures and work practices associated with the work of Capital Works Delivery (CWD) project management, Q4 2026.

Recommendation 6: City Council request the City Manager to require all City Divisions to keep appropriate capital project information up-to-date in the City's T.O.INview database, and request relevant City Agencies and Corporations to reinforce or develop processes, to provide the City with timely and accurate capital project information to improve coordination among stakeholders.

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame:
City Manager will issue directive memo to all Division Heads regarding capital project information database input requirements and send a request to Agencies and Corporations to reinforce or establish processes for relevant capital project information sharing with the City, by Q1 2026.

General Manager, Toronto Water will support City-wide efforts to maintain up-to-date and reliable project data in T.O.INview, in accordance with City Manager direction, by **Q1 2027**.

Recommendation 7: City Council request the General Manager, Toronto Water, to:

- a. **Explore opportunities, in consultation with the City's Chief Technology Officer, to accelerate the implementation of Trimble Unity Construct, a new project management information system, to analyze change order categories and incorporate them into lessons learned to better monitor current and future projects; and**
- b. **Enhance inter-divisional coordination, in consultation with the General Manager, Transportation Services Division, and implement improvements to the Road Disruption Activity Reporting System to support improved capital planning and delivery outcomes, including reducing delays of awarded construction contracts, through mechanisms such as multi-site permitting.**

Management Response: ☒ **Agree** ☐ **Disagree**

Comments/Action Plan/Time Frame:

Accelerating Toronto Water's implementation of Trimble Unity Construct will enable Toronto Water to realize earlier benefits related to improved project oversight, enhanced data integration, and strengthened accountability across capital delivery functions. Early implementation will also support timely action on the Auditor General's recommendations and eliminate the need for temporary or ad hoc systems to address identified gaps.

Toronto Water will collaborate with the City's Trimble Unity Construct project team to assess the analytical capabilities of the system to identify trends, evaluate the root causes of delays or cost variances, and integrate lessons learned into future capital planning and delivery.

Current limitations within the Road Disruption Activity Reporting System (RoDARS) create challenges in coordinating and scheduling multi-site infrastructure projects. RoDARS treats each road occupancy permit as a stand-alone record, even when multiple permits relate to the same project. This structure prevents the system from recognizing dependencies between related work areas, meaning schedule changes to one site are not automatically reflected in others. As a result, Toronto Water must apply for permits in phases as construction nears each location, shortening the coordination window and increasing the risk of conflicts with other City divisions or utilities.

Toronto Water will consult with Transportation Services to identify if opportunities to improve coordination and reducing administrative delays that affect construction schedules.

Timeline to completion:

The General Manager, Toronto Water, will make a written submission to the Trimble Unity Construct project lead by **Q1 2026** requesting the accelerated implementation of Trimble Unity Construct for Toronto Water.

General Manager, Toronto Water, to facilitate engagement with General Manager, Transportation Services, to identify opportunities to enhance the permitting process for projects requiring multiple site permits with schedule dependencies, by **Q2 2026**.

Recommendation 8: City Council request the General Manager, Toronto Water, to:

- a. Ensure that the mark-up requirements are clearly communicated in the contract and clarified with the contractor and consultant at the start of the project;
- b. Assess whether mark-ups were correctly charged in accordance with contract terms for other change orders and identify any other projects that may be affected; and
- c. Strengthen the consultants and Capital Works Delivery project managers' review of mark-up on change orders to ensure compliance with the contract terms.

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

A mark-up is an added percentage for overhead and profit added on top of the contractor's actual costs. Mark-ups are capped by contract terms. Verifying that contractors and consultants are adhering to these terms in an important internal control, in particular when approving change orders.

Toronto Water will review standard contract language to ensure that contractors and consultants are provided clear direction regarding mark-up requirements to support compliance with contract terms.

Errors made, resulting in overpayment by the City should be recovered where possible. Toronto Water will conduct an assessment of contracts where substantial performance has not reached to ensure adherence to contract mark-up terms within change orders. Attempts will be made to recover overpayment made by the City.

To support sustained compliance and staff competency, Toronto Water will develop and implement an annual training for Capital Works Delivery project managers that will include a review of policies, procedures to manage change during construction.

Timeline to completion:

General Manager, Toronto Water to conduct a review of contract terms to ensure clear direction is provided to contractors and consultants.

General Manager, Toronto Water to conduct an assessment of change order of open contracts to ensure mark-up terms were appropriate applied to change orders by **Q1 2027**.

General Manager, Toronto Water will initiate the provision of various ad hoc training modules in Q1 2026 to address some of the issues raised by the Auditor General in this report with the aim of reviewing, developing and finalizing a new Annualized Training Program by **Q4 2026**.

Recommendation 9: City Council request the General Manager, Toronto Water, in consultation with Legal Services, Purchasing & Materials Management Division, and Engineering and Construction Services, to review and assess the need to update City policies and procedures and training to provide guidance to project managers on when to consider adding a price adjustment mechanism in contracts for the projects they manage.

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame: Toronto Water acknowledges that market conditions related to the COVID-19 pandemic and global supply chain disruptions resulting from the conflict in Eastern Europe, resulted in significant material and labour price increases. In some cases, this led to exceptions being granted to compensate contractors for price escalation even where contracts did not include a price adjustment mechanism. In consultation with Legal Services, Engineering and Construction Services (ECS), and the Purchasing and Materials Management Division (PMMD), and through existing City initiatives such as the Enhancing Capital Delivery Program and the Price Volatility Working Group led by Purchasing and Materials Management Division, Toronto Water will review existing contract templates, processes, policies and procedures to identify where updates are required to provide clear and consistent guidance and training to the project managers on the use of price adjustment mechanisms in contracts. Timeline to completion: Toronto Water, in collaboration with ECS, PMMD, and Legal Services, will complete its review by Q4 2026 and provide recommended updates to relevant policies, procedures, and training materials by Q2 2027 .

Recommendation 10: City Council request the General Manager, Toronto Water, to:

- a. **Clearly and consistently communicate inspection reporting requirements in the contracts and ensure they align with the manual;**
- b. **Ensure consultants document their inspection in accordance with the manual;**
- c. **Establish routine spot checks to ensure projects managed by the Capital Works Delivery unit are receiving adequate on-site inspection services from consultants, and that inspection records are complete, accurate, and regularly retained by City staff;**
- d. **Strengthen Capital Works Delivery project manager oversight of consultant responses to Request for Information and other submissions to ensure timely responses to contractors; and**
- e. **Ensure contractors and consultants provide all required documentation with their progress payment applications, in compliance with the contract requirements.**

Management Response: ☒ Agree ☐ Disagree
Comments/Action Plan/Time Frame: The Auditor noted that consultant administered projects did not consistently demonstrate timely responses to Requests for Information (RFI) or consistent documentation practices, and that oversight responsibilities between the consultant and City project manager were not always clearly defined. Toronto Water will work to strengthen communication, training, and quality assurance practices to ensure that consultants receive clear communication regarding documentation, reporting, and RFI response requirements at the start of each assignment. Toronto Water will also review its standard contract terms and related procedures to ensure that RFI response timelines are reasonable and reflect the complexity, size, duration, and scope of each project. To support sustained compliance and staff competency, Toronto Water will develop and implement an annual training program for Capital Works Delivery project managers that includes the review and verification of consultant submissions, covering requirements for documentation completeness, accuracy, and consistency, and will implement a quality assurance framework, including periodic spot checks, to verify that consultant documentation meets contract requirements and that RFI responses, progress reports, and meeting minutes are appropriately reviewed, filed, and retained. Timeline to completion: The General Manager, Toronto Water, will complete the review of consultant communication materials, training resources, and standard contract terms by Q4 2026. Updated training for project managers and implementation of spot-check procedures will follow as part of Toronto Water's annual quality assurance and training programs.

Recommendation 11: City Council request the General Manager, Toronto Water, to:

- a. Ensure the project managers complete contractors' and consultants' performance evaluations in accordance with the contract and City policies and procedures;**
- b. Clarify with consultants the number and frequency of contractors' performance evaluations required;**
- c. Explore opportunities to incorporate the evaluation scores of consultants and contractors into future bid evaluations, in consultation with the Chief Procurement Officer and Legal Services; and**
- d. Conduct a cost and benefit analysis to assess the optimal balance between using consultants and in-house staff for certain site inspection and contract administrative activities.**

Management Response: ☒ Agree ☐ Disagree

Comments/Action Plan/Time Frame:

Performance evaluations are an important accountability and quality-control tool used by the City to measure and document vendor and consultant performance, promote accountability, improve future contract delivery, and support transparent procurement decisions.

Toronto Water will review the performance evaluation guidance materials for Capital Works Delivery project managers and consultants to ensure adequate information and instruction are provided to support adherence to City policies, procedures, and contract terms.

Similar to the approach outlined in Toronto Water's response to Recommendation 2, Toronto Water will seek to improve its own practices while recognizing the value of collaborating with corporate partners to promote consistency across the City. Toronto Water will coordinate with other City Divisions, Purchasing and Materials Management Division, Legal Services, Engineering and Construction Services, and the Enhancing Capital Construction Delivery Program to identify methods to support the consistent and fair application of performance evaluation scores in the bid and proposal evaluation process.

Toronto Water senior management is currently reviewing the use of contracted services versus City staff for certain site inspection activities to determine the most effective and efficient service delivery model.

Timeline to completion:

The General Manager, Toronto Water, in collaboration with Purchasing and Materials Management Division, Legal Services, Engineering and Construction Services, and the Enhancing Capital Construction Delivery Program, will complete the review of performance evaluation guidance materials and related procedures and will prepare recommendations for integrating performance scores into bid and proposal evaluations, by **Q1 2027**.

The General Manager Toronto Water to complete the analysis of the optimal use of in-house vs contracted staff for certain inspection activities by **Q1 2026**.

Recommendation 12: City Council request the General Manager, Toronto Water, to:

- a. **Consider developing additional key performance indicators and incorporating them into contracts to establish performance standards for both consultants and contractors to encourage their performance, in consultation with Purchasing & Materials Management Division, Strategic Capital Coordination Office, and Engineering and Construction Services; and**
- b. **Develop and monitor key performance indicators (KPIs) at the program level for the Capital Works Delivery unit, including KPIs that focus on change order and schedule management, and client unit satisfaction.**

Management Response: ☒ **Agree** ☐ **Disagree**

Comments/Action Plan/Time Frame:

The Enhancing Capital Construction Delivery Program has been directed by Council Agenda Item History - 2025.IE20.1 to implement an enhanced performance management program starting in 2026. As noted in Toronto Water's management response to Recommendation 2, Toronto Water supports a consistent, City-wide approach to capital delivery and is committed to actively contributing to this effort.

Toronto Water's existing KPI and Business Metrics Program includes several capital delivery indicators that are reported quarterly within the Division and roll up into higher-level metrics under the Division's Strategic Plan, such as Operational Excellence and Infrastructure Management. Building on this foundation, Toronto Water will develop additional measures to evaluate performance related to change order management, schedule adherence, and client unit satisfaction.

Timeline to completion:

The General Manager, Toronto Water, in collaboration with Engineering and Construction Services, and the Strategic Capital Coordination Office, will develop and implement contract level KPIs by **Q4 2027**, in alignment with the Enhancing Capital Construction Delivery Program performance framework.

The General manager, Toronto Water, will review and where necessary augment the Capital Works Delivery metrics to ensure performance measures adequately track change order and schedule management, as well as client unit satisfaction **Q4 2027**.

**AUDITOR
GENERAL**

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