

Subject: Project Delivery and Cost Estimating Guidelines Update

File Number: ACS2026-IWS-AM-0002

Report to Finance and Corporate Services Committee on 3 March 2026

and Council 11 March 2026

Submitted on February 20, 2026 by Susan Johns, Director, Asset Management

Contact Person: Meagan Wheeler Cuddihy, Program Manager, Capital Planning/Strategic Asset Management, Infrastructure and Water Services Department

Meagan.WheelerCuddihy@ottawa.ca

Ward: Citywide

Objet : Mise à jour des lignes directrices sur la réalisation de projets et l'estimation des coûts

Numéro de dossier : ACS2026-IWS-AM-002

Rapport présenté au Comité des finances et des services organisationnels

Rapport soumis le 3 mars 2026

et au Conseil le 11 mars 2026

Soumis le 2026-02-20 par Susan Johns, Directrice, Direction de la gestion des actifs

Personne ressource : Meagan Wheeler Cuddihy, Gestionnaire de programme, Planification des immobilisations / Gestion stratégique des actifs, Direction des infrastructure et services d'eau

Meagan.WheelerCuddihy@ottawa.ca

Quartier : À l'échelle de la ville

REPORT RECOMMENDATION(S)

That the Finance and Corporate Services Committee recommend Council approve:

- 1. The updated Project Delivery Review and Cost Estimating Guidelines, as**

outlined in this report and attached as Appendix A.

- 2. Delegating authority to the General Manager, Infrastructure and Water Services, and the Director, Asset Management individually, to make and approve technical amendments to the Project Delivery and Cost Estimating Guidelines, as described in this report.**

RECOMMANDATION(S) DU RAPPORT

Que le Comité des finances et des services organisationnels recommande au Conseil de :

- 1. la version à jour des Lignes directrices sur l'évaluation de la réalisation et l'estimation des coûts des projets, exposées dans le présent rapport et reproduites ci-joint dans l'annexe A;**
- 2. la délégation du pouvoir, individuellement, à la directrice générale, Services d'infrastructure et d'eau, et au directeur, Gestion des actifs, d'apporter des modifications techniques aux Lignes directrices sur l'évaluation de la réalisation et l'estimation des coûts des projets, et d'approuver ces changements, conformément aux modalités exposées dans le présent rapport.**

BACKGROUND

The City of Ottawa manages numerous capital programs annually, involving significant investments in the renewal and growth of infrastructure. These projects focus on maintaining and improving various municipal assets like roads, bridges, buildings, parks, water and wastewater systems, City facilities and transit infrastructure, while also addressing future growth and intensification.

Given the scale, complexity, and financial significance of the City's capital investments, the City relies on a consistent and transparent framework for estimating total project costs and communicating cost certainty and risk. The Project Delivery and Cost Estimating Guidelines are a critical tool that supports the effective planning, budgeting and execution of the City's infrastructure projects, helping to ensure they are delivered successfully and responsibly.

Since Council approved the Project Delivery Review and Cost Estimating report in 2013 ([ACS2013-PAI-INF-0012](#)), the City's master plans and Long-Range Financial Plans have continued to evolve, forecasting funding needs and guiding capital program and infrastructure development. While the Project Delivery Review and Cost Estimating Guidelines were not formally updated to Council during this period, the City has continued to refine and apply its project delivery and cost-estimating practices through the use of updated tools, improved methodologies, and lessons learned from project experience.

These practices have been shaped over time by internal and external reviews, an audit [recommendation](#), and ongoing improvement and assurance activities. The updates proposed in this report formalize these lessons into a clear, consistent, and transparent framework that strengthens capital project delivery, supports reporting to Committee and Council, and informs future capital budget development.

Updates also reflect insights from internal initiatives such as the Integrated Departmental Management Plan, which led to the development of the vISion project management software launched in 2018, as well as external expertise from specialized cost consultants and the City's experience delivering hundreds of projects each year. Since the original 2013 guide provided an initial foundation, the framework has evolved to encompass a broader range of project types, including facility projects with distinct engineering, architectural, and landscape architectural considerations. The updated Guidelines capture best practices across the full project delivery lifecycle, including enhanced risk management and contingency approaches informed by recent challenges such as the COVID19 pandemic, labour disruptions, and supply chain volatility.

DISCUSSION

The purpose of this report is to obtain Council approval on the updates to the Project Delivery Review and Cost Estimating Guidelines (Appendix A) to ensure consistent, transparent, and reliable methods for estimating total project costs across all capital projects. These Guidelines will be applied to future capital budget documents and reports to Committee and Council, enabling clearer communication of cost certainty and risk levels. This aligns with industry best practices, public inquiry recommendations and audit findings, and supports improved financial stewardship and decision making.

Project delivery review

The Project Delivery Review guide serves as a reference for staff by explaining roles and responsibilities, processes and tools available throughout all stages of a project from project initiation to project completion. Attachment 1 to the Guidelines depicts this progress and key milestones.

In 2025, the Review was updated to refine the cost-estimation practices introduced in 2013 and to reflect a broader application across City construction projects, risk management, infrastructure planning and financial planning activities.

Classification system

A primary focus of the Project Delivery Review and Cost Estimating Guidelines (Appendix A) is the establishment of a standardized cost estimate classification system

that identifies the class of estimate, associated contingencies, risks, and expected level of accuracy at various project stages. One way to reflect the level of cost certainty in a budget estimate is through the use of contingency allowances. At early project stages, when information and design maturity are limited, higher contingency allowances are applied to account for uncertainty. As projects progress and design and risk information becomes more complete, contingency allowances are reduced accordingly.

The cost estimate classification system shown in Attachment 2 shall be adopted for the scope of all projects, to ensure consistent methods of estimating. Attachment 2 sets out the contingency allowances applied to overall project budget estimates at each stage of project development, reflecting the corresponding level of knowledge, risk, and information available. A description of the various components that should be included in a project cost estimate is provided in Attachment 3. The cost for each component is calculated as a percentage of the Construction Cost Estimate. Estimators familiar with the project select a percentage from a recommended range based on various factors such, as but not limited to, project size, risk, duration, site knowledge and complexity.

Cost estimate classification systems are used to define the level of cost certainty at different project stages. The following are the definitions used by the City:

- A. Class A Estimate: Pre-Tender - A detailed estimate based on complete contract documents for tendering, include contingency allowances of 5 to 10 percent.
- B. Class B Estimate: Design Level Estimate - An estimate based on design completed to a preliminary to detailed level, after site investigations and studies have been completed, include contingencies of 10 to 20 percent.
- C. Class C Estimate: Planning Level Estimate - A ballpark estimate prepared based on functional requirements/functional design/environmental assessments with limited site information, used for planning purposes, apply contingencies of 20 to 30 percent.
- D. Class D Estimate: Conceptual Level Estimate - A rough order-of-magnitude estimate used for comparison purposes between alternative solutions that have been prepared on the same basis. Conceptual Level (Class D) estimates, which rely primarily on historical cost information, require the highest contingency allowances, ranging from 40 to 50 percent.

It should be noted that the contingency allowance is to mitigate for uncertainty such as

unforeseen site conditions or elements within the approved scope, and is not intended to cover costs of major additions or revisions to the project scope. Any changes in scope require corresponding adjustments to project funding and schedule.

Cost estimating is a shared responsibility across the project lifecycle, with accountability increasing as projects progress from planning and conceptual stages through to design and construction. Early-stage estimates reflect higher uncertainty and are refined over time as scope, design maturity, and risk information improve, ensuring cost certainty and risk are appropriately communicated at each stage.

Project risks

The updated guidelines emphasize the importance of avoiding premature or overly definitive cost expectations until sufficient evidence, risk analysis, and design maturity support more reliable estimates. The guide continues to provide practical advice on developing credible cost estimates that offer comprehensive contextual information, improve understanding of uncertainties and risks, and validates the evidence used. These factors were considered as part of the comprehensive review of existing policies, processes, and tools related to project management and cost estimation across the City.

Attachment 4 outlines common construction risk factors and their application across specific project categories. These risk factors can be identified, assessed, and quantified as “known” contingencies, allowing them to be explicitly incorporated into project cost estimates. By identifying and tracking known risks separately, the remaining contingency reflects residual “unknown” risks and uncertainties, improving transparency and confidence in overall cost estimates. This approach also supports ongoing refinement of estimating practices as project experience grows. Over time, the City will continue to develop guidance for additional construction risk factors, as appropriate, to support consistent application across other project categories.

Delegation of authority

Staff are seeking delegated authority for the General Manager of Infrastructure and Water Services, and the Director, Asset Management individually, to make technical updates as standards evolve. Use of delegated authority will be reported to Council annually, ensuring Council’s strategic oversight while enabling Infrastructure and Water Services to respond promptly to changes in project delivery practices, ultimately supporting more effective and accountable capital project management.

Next steps

The Project Delivery Review will continue to be updated on a regular basis, with staff monitoring opportunities for future improvements. These may include expanding the range of project categories with defined construction risk factors, as well as increasing the number of specific risk factors considered in developing estimates. Staff also plan to refine guidance for estimating small projects (under \$100,000) versus large projects (over \$10 million). In addition, the percentages used to calculate soft costs will be updated periodically to reflect the most current historical project-cost data.

The updated Project Delivery Review and Cost Estimating Guidelines will be communicated across the organization to encourage consistency and support project chartering in all departments. Regular communication and training support on updates to the project implementation process, these Guidelines and Project Charter process help ensure an efficient process and consistent approach.

FINANCIAL IMPLICATIONS

There are no direct financial implications.

LEGAL IMPLICATIONS

There are no legal impediments to implementing the recommendations in the report.

COMMENTS BY THE WARD COUNCILLOR(S)

The project delivery and cost estimating update applies City-wide.

CONSULTATION

Staff have consulted interdepartmentally and across the organization where required.

ACCESSIBILITY IMPACTS

There are no accessibility impacts associated with the report recommendations.

ASSET MANAGEMENT IMPLICATIONS

The City of Ottawa uses asset management planning to guide project delivery and cost estimating, ensuring efficient and cost-effective infrastructure management. This involves a comprehensive approach to managing the lifecycle of assets, from acquisition to disposal, considering factors like risk, service levels, and financial implications.

RISK MANAGEMENT IMPLICATIONS

The Guide strengthens the City's approach to risk and contingency management by expanding guidance on identifying construction risk factors and adjusting contingency throughout the project lifecycle. It supports project delivery teams with clearer, more consistent practices and aligns fully with the City's Enterprise Risk Management and corporate project-delivery frameworks.

RURAL IMPLICATIONS

The project delivery and cost estimating update applies City-wide.

TECHNOLOGY IMPLICATIONS

There are no technological implications with receiving this report.

TERM OF COUNCIL PRIORITIES

This report supports the City's ongoing commitments to the current Term of Council Priorities of:

A city that is more connected with reliable, safe and accessible mobility options.

SUPPORTING DOCUMENTATION

Appendix A – Project Delivery Review and Cost Estimating Guidelines

Attachment 1 – Project Delivery Review (PDR)

Attachment 2 – Capital Cost Estimate Classification System

Attachment 3 – Capital Cost Estimate Components

Attachment 4 – Construction Risk Factors

DISPOSITION

The updates to the cost estimate classification system will be used for implementation of capital projects, reports to Council and future budget documents. Internal templates will be available to assist staff in the cost estimating process. These templates will be reviewed and updated as part of any future updates to the cost-estimating guidelines.