

West Toronto Railpath Extension Cost Estimate Peer Review

Date: November 26, 2024

To: Executive Committee

From: General Manager, Transportation Services

Wards: Ward 9 Davenport, Ward 4 Parkdale-High Park, Ward 10 Spadina-Fort York

SUMMARY

This report responds to direction from City Council in EX17.11 that Transportation Services work with the Chief Financial Officer and Treasurer to examine the capital budget and plan for the West Toronto Railpath Project, and to report back to the Executive Committee with an update on the project, including the process of due diligence and findings of an independent third-party estimate review.

The West Toronto Railpath (WTRP) is a fully off-street pedestrian and cycling pathway that connects neighbourhoods, provides communities with greenspace and public realm amenity space, and serves as a safe active transportation corridor. The existing WTRP which runs 2.1 km from north of Dupont Street to Dundas Street West, was first endorsed by Council in 1998, and opened in 2008/2009.

The second phase of the WTRP, known as the West Toronto Railpath Extension (WTRPE), will extend the Railpath an additional 2.1 km south to Sudbury Street, approximately 200m south of Queen Street. Much more than a pathway, the WTRPE is a significant infrastructure project that includes four bridges, including a 350 m long elevated section crossing the Barrie rail corridor, two public plazas and seven new community connections, providing direct access to the WTRP from Lansdowne Avenue, Shirley Street, Northern Place, Delaney Crescent, Brock Avenue, Dufferin Street and Queen Street.

Once fully realized, the WTRP will be 4.2 km in length, providing a critical link connecting neighbourhoods from the Junction all the way to downtown and providing more than 26,000 residents with access to 6,000 jobs, as well as supporting the City's TransformTO and congestion management goals. While the WTRP itself is 4.2 kms in length, it connects to key east-west cycling routes that complete over 20 kms of trail connection through the city, providing direct access for 82,000 residents and 179,000 jobs or 12% of Toronto's total jobs within 250 metres of these key routes.

In May 2017, through MM29.47, City Council authorized the General Manager, Transportation Services, to negotiate, enter into agreements with Metrolinx for the design and construction of the WTRPE. Transportation Services and Transit Expansion staff are currently finalizing a Municipal Infrastructure Agreement with Metrolinx for delivery of the WTRPE.

The WTRPE is at 100% design and is expected to be released for tender in January 2025. The third-party cost estimate peer review recently conducted and summarized in this report offers some assurance that the project costing provided to the City are appropriate for the purposes of identifying a suitable allowance for the project in Transportation Services Capital Budget 2025-2034. Further, the third-party review will provide a reliable baseline for the review of incoming contractor bids to realize the construction of this major infrastructure project.

RECOMMENDATIONS

The General Manager, Transportation Services recommends that:

1. Executive Committee receive this report for information.

FINANCIAL IMPACT

There are no financial implications resulting from the recommendations included in this report.

This report contains a summary of the third-party peer review of the project cost estimates created by Metrolinx for the West Toronto Railpath Extension. Starting in 2020, Transportation Services has included requests for WTRPE funding in the annual budget submission. The 2024-2033 Capital Budget and Plan for Transportation Services adopted by City Council included \$149 million in funding as per Table 1.

Table 1: Funding Sources for the West Toronto Rail Path Extension

Funding Source	Budget (\$ in millions)
Federal Grant	\$23.028
Debt	\$94.541
Development Charges	\$31.431
Total	\$149.000

In 2024, the City of Toronto secured \$23 million towards the cost of the WTRPE project from the Federal government's Active Transportation Fund. The project is also eligible to receive 25% in development charges funding as per the most recent Development Charges bylaw.

The Chief Financial Officer and Treasurer has reviewed this report and agrees with the information as presented in the Financial Impact Section.

DECISION HISTORY

On October 9, 2024, City Council directed staff to examine the capital budget and plan for the West Toronto Railpath Extension project, and to report back on the process of due diligence and findings of an independent third-party estimate review.

<https://secure.toronto.ca/council/agenda-item.do?item=2024.EX17.11>

On October 9, 2024, City Council requested the Auditor General to include an audit of the WTRPE in their 2025 Work Plan.

<https://secure.toronto.ca/council/agenda-item.do?item=2024.MM22.11>

The West Toronto Railpath Extension has been included as part of the Cycling Network Plan since 2016 as well as the 2019-2021, 2022-2024, and 2025-2027 near-term programs approved by Council:

- 2024: <https://secure.toronto.ca/council/agenda-item.do?item=2024.IE14.3>
- 2021: <https://secure.toronto.ca/council/agenda-item.do?item=2021.IE26.9>
- 2019: <https://secure.toronto.ca/council/agenda-item.do?item=2019.IE6.11>
- 2016: <https://secure.toronto.ca/council/agenda-item.do?item=2016.PW13.11>

In May 2017, City Council authorized Transportation Services to enter into an Agreement with Metrolinx for project design and construction of the West Toronto Railpath.

<https://secure.toronto.ca/council/agenda-item.do?item=2017.MM29.47>

In May 2016, the Minister of the Ministry of Environment, Conservation and Parks approved the West Toronto Railpath Extension Environmental Assessment study.

In June 2012, City Council endorsed the Bikeway Trails Plan, which identified the West Toronto Railpath.

<https://secure.toronto.ca/council/agenda-item.do?item=2012.PW15.2>

In June 1998, City Council endorsed the Inventory of Cycling Trail Opportunities in Rail and Hydro Corridors, which identified the West Toronto Railpath.

<https://www.toronto.ca/legdocs/1998/agendas/committees/ud/ud980615/it010.htm>

COMMENTS

Project Status

In 2017, after the completion of the West Toronto Railpath Extension Environmental Assessment (2016), City Council authorized Transportation Services to negotiate, enter into, and execute agreements with Metrolinx for the design and future construction of the Railpath Extension.

Metrolinx is the construction lead on the project and will assume responsibility for tendering the contract and managing the construction. City staff have been fully

involved in the project development and project management including approval of the design and tender package and project oversight in order to ensure that delivery of the work will meet City requirements.

Much of the property within the approved alignment of the Railpath Extension is within or directly adjacent to the Metrolinx rail corridor and, as such, design and construction of the project is required to be coordinated with Metrolinx's GO Rail Expansion Program. Agreements with Metrolinx for the design and construction are required to achieve efficiencies in capital coordination and project completion timeframes.

The City of Toronto is responsible for acquiring six private properties required for the project. Of these, four have been acquired and two are in the final stages of acquisition.

Since the substantial completion of detailed design in partnership with Metrolinx in 2020, the City has been working to secure property requirements, relocate major utilities, secure required permits and coordinate with Metrolinx's Kitchener GO Line expansion project, which required realignments and upgrades along the existing WTRP.

Since 2017, the City has spent or committed approximately \$21.8 million on design and engineering costs, property acquisition and project management costs, of which \$2.71 million was partly funded by the Federal government in the form of a grant from the Public Transit Infrastructure Fund Program.

Subject to the execution of an agreement with Metrolinx for delivery of the WTRPE, Transportation Services and Metrolinx anticipate the WTRPE construction tender will be advertised by January 2025. Metrolinx anticipates the construction contract for this work will be awarded in spring 2025 and the construction is estimated to take approximately three years to complete. The timeline for construction will be confirmed once the contract is awarded, and a construction schedule has been developed.

Project Cost Estimates

In 2016, the WTRPE Environmental Assessment identified \$23 million as a preliminary cost estimate to construct the project, excluding property acquisition, environmental remediation, utility relocations, and professional costs related to design, engineering and project management. This initial estimate was based on limited level of design at a functional plan level only and assumed that further work would be needed to identify the costs of property acquisition, environmental remediation, utility relocation and project management.

Over several years of project development, cost estimations became more refined reflecting more detailed design and including all professional services, soil remediation, risks and contingencies which brought the current project cost estimate to \$132 million. In addition, the City has estimated \$16 million for the acquisition of six properties required to complete the project. As such, the total budget allocation for the WTRPE

project as per the City Council approved Transportation Services 2024-2033 Capital Budget and Plan is currently about \$149 million.

The estimate reflects many complex factors, including but not limited to:

- Environmental remediation, for which the current estimate accounts for extensive soil contamination requiring remediation to meet maximum requirements at three distinct properties. A Phase 2 environmental assessment is forthcoming for these three sites that are currently not accessible, and will be completed once property acquisition is complete, materials are relocated and the current Metrolinx work zone cleared respectively;
- Construction of four new bridges crossing the Barrie Corridor rail line, Lansdowne Avenue, Brock Avenue, and Queen Street, which include required isolation barriers;
- New retaining walls along the WTRPE;
- Relocations of major utilities;
- Material cost increases;
- Provisional items;
- Risk allowances;
- Contingency allowances;
- Professional engineering, management and assurance services; and
- Recognition of current market conditions in the Toronto area.

On this latter point, Metrolinx has advised the City that it has experienced cost pressures across its programs stemming from market economic challenges and market saturation for large and complex capital projects, amongst other factors. Metrolinx's engagement with the market also identified several current conditions that have led to higher costs in comparison to earlier estimates, including:

- Uncertainty in supply chain and market conditions including past effects on commodity prices and risk of availability;
- Significant concerns about the uncertainty of cost inflation, resulting in the project owner retaining the risk of future cost increases and needing to protect against future cost pressures beyond current projections;
- An increase of projects in the rail sector, as well as other construction sectors, leading to labour shortages and less market participation/competition, including opportunities with other clients in the market that have lower risk scenarios or require less time to deliver; and
- New requirements relating to safety and reducing the impacts on rail service which are now included in contracts within rail corridors.

Cost Estimate Peer Review Summary of Findings

Transportation Services worked with LEA Consulting to conduct a thorough third-party peer review of cost estimates for the WTRPE provided by Metrolinx, to compare both the pricing and assumptions used to develop the estimate with other relevant infrastructure projects. This exercise helped to ascertain where project cost estimations are reasonable, where they have high variance from other relevant projects through industry comparisons, and where the actual costs are likely to vary from the estimates.

Cost Estimate Rationale

Several assumptions are important to consider in understanding the current estimated cost of the West Toronto Railpath Extension:

- The cost estimate was developed using conservative risk factors to assure that necessary budget was available to accommodate the maximum requirements for soil remediation, retaining wall construction, utility relocations, any redesign required during the construction stage, schedule delays and fees for contractors, Metrolinx administration and overhead costs;
- Construction costs included in the November 2023 estimate were developed using current market pricing based on bid-pricing from Metrolinx's latest projects which are updated quarterly;
- The costs associated with third-party Contract Administration are currently estimated at 15%, including engineering support to address unforeseen circumstances during construction, as well as additional requirements for Metrolinx oversight. These estimates will be revised based upon a forthcoming third-party Contract Administration estimate;
- Various cost categories, which may currently be considered as risk, will be recategorized as fixed costs once the tender is awarded. These include both provisional and cash allowances, such as but not limited to, utility relocations, traffic management and phasing, material testing and inspection, and retaining walls; and
- Estimates for Metrolinx staff time and administration on this project were determined based on Metrolinx's experience on other recent projects of similar scale and complexity. These were conservatively estimated at 10% of total construction cost including contingency, but the City will be billed for actual hours spent, with detailed reporting.

Detailed Cost Comparisons

LEA Consulting conducted a detailed review of every line item in the WTRPE cost estimate and the assumptions that went into the calculations. In collaboration with City staff, Metrolinx's project team, sponsors and cost estimation team, assumptions were tested and detailed estimation calculations reviewed. However, given the upcoming competitive procurement process for this project in January 2025, this report does not include any details on unit pricing and focuses on comparing the estimates provided against industry comparisons, so as to not inadvertently influence the competitive bidding process.

Line items were compared against the following sources:

- Average Highway Costing (HiCo) System unit pricings for projects located in Toronto (or within Ontario, if unavailable);
- Comparable City projects where Metrolinx is the delivery partner;
- Unit pricings received from the City's Transportation Services and Engineering Construction Services divisions;
- Recent tender pricings received from contractor bids; and
- Other comparable unit pricings from projects of similar complexity.

For each line item, the range of industry standard rates were calculated based on the 95th percentile and 5th percentile of the available rates, to avoid skewed data as a

result of outliers. Rates were assumed to be consistent with the Metrolinx estimates for items where comparisons were unavailable (e.g. flagging costs).

The following table, Table 2, compares cost categories to the sources identified above, using the costs from the 2024 October estimate as the baselines. Based on the current available comparisons, the upper ranges of industry standard were found to be somewhat higher (6% - 19%) than the estimates provided by Metrolinx. In contrast, the lower ranges were significantly lower (5% - 74%). This illustrates that the Metrolinx estimate is in the appropriate range for all cost categories, although the third-party professional services cost is on the high end.

Table 2: Comparison of Metrolinx WTRPE project cost estimates to current industry standard.

Note: Metrolinx’s estimate is considered the “0%” baseline and + / - represent industry standard variation from the Metrolinx estimate.

Cost Category	Industry Upper Range	Industry Lower Range
Direct construction costs	+6%	-9%
Indirect construction costs	+16%	-26%
Provisional items and contingency	+18%	-5%
Direct Metrolinx professional services costs	+12%	-16%
Third-party Contract Administration costs	+19%	-74%

Based on this review, and the acknowledgement that Metrolinx material costs are updated quarterly through their internal cost estimating team, it can be determined that in general, Metrolinx cost estimates are generally within industry standard, leaning towards the upper end. For the purpose of budget determination, this conservative approach provides some assurance that sufficient budget is being allocated.

Anticipated Variance and Impact of Bidding Process

The most recent cost estimate provided by Metrolinx for the WTRPE is the result of a detailed exercise to anticipate and account for various eventualities or financial risk that could impact the cost of the project to ensure that the City has the budget to complete the project before releasing and awarding the tender and commencing the work.

It can be anticipated that through the bidding process that many of the line items estimated by Metrolinx have the potential to come in lower due to the competitive procurement process.

There are also several line items that have been estimated very conservatively, but are not fixed costs, and will be billed at hourly rates or lump sum costs, once more variables are addressed, for example:

- Two utility relocations are still in preliminary design; detailed design will refine the cost; and
- Three locations are currently unavailable for Phase II soil testing; based on the Phase I assessment, the maximum requirements for soil remediation were assumed.

Another aspect of the cost estimate where project costs are expected to decrease, subject to competitive bidding by contractors, is in relation to anticipated cost escalations. In the estimate provided by Metrolinx, a very conservative approach was taken in calculating the increase of material costs over the duration of the project. Upon revisiting these calculations with Metrolinx, it has been determined that a more standard approach could reasonably be applied, resulting in a 5.5% decrease in anticipated cost escalations.

Upon further review with Metrolinx, two other key factors that are anticipated to result in project cost decreases include:

- Third-party contract administration costs are expected to reduce from an estimated 15% of the total construction cost including contingency to an estimated 5-10% of total construction costs; and
- Traffic management and retaining wall costs for the WTRPE Bridge crossing the Barrie rail corridor south of Dundas Street, are now reduced from the original 5% of the direct construction cost to an estimated 3%.

The following Table 3 outlines which aspects of the cost estimate are anticipated to be impacted by either the bidding process or actual costs. As noted in Table 3, there are no fixed costs in the estimate that the City would be required to pay, rather, all aspects of the estimate are subject to either competitive bidding or actual services provided, which will be closely monitored with monthly invoicing throughout the duration of the project.

Table 3: Breakdown of Fixed Costs, Anticipated Variation, and Estimate Categories which will be Subject to Competitive Bidding

Cost Category	Fixed Cost	Conservative Estimate - to be Billed on Actuals	Subject to Competitive Bidding by Contractors
Four (4) bridge structures, retaining walls and associated traffic management			☑
Grading and site development			☑
Mechanical & electrical works			☑
Loss of productivity associated with working in an active rail corridor			☑
Cost estimate uncertainty			☑
Contractor costs – construction management, overhead, work zone safety measures			☑
Soil remediation costs		☑	
Utility relocations (natural gas regulator and switch heater)		☑	
Provisional plaza at 1875 Dundas Street West			☑
Construction contingency		☑	
Metrolinx administrative costs and contingency		☑	
Metrolinx overhead and contingency		☑	
Rail corridor flagging costs		☑	
Metrolinx retained risk		☑	
Non-recoverable HST		☑	
Contract administration and contingency			☑
Other staff - project management, retained consultants		☑	

Next Steps

In accordance with Council direction, City staff are working to finalize and execute a Municipal Infrastructure Agreement with Metrolinx for the delivery of the WTRPE. Subject to the execution of an agreement with Metrolinx for delivery of the WTRPE, Transportation Services and Metrolinx anticipate the WTRPE construction tender will be advertised by January 2025.

LEA Consulting has been retained to support the bid analysis process by providing a third-party review of the incoming bids for the WTRPE, in advance of City of Toronto and Metrolinx awarding the bid to the selected contractor.

Metrolinx anticipates the construction contract for this work will be awarded in spring 2025 and the construction is estimated to take approximately three years to complete. The timeline for construction will be confirmed once the contract is awarded, and a construction schedule has been developed.

Following tender award, ongoing cost control will continue throughout the WTRPE project duration, through both third-party contract administration and City staff oversight, by means of detailed reporting and monthly invoicing. City staff will continue to be fully involved in project management and project oversight in order to ensure that delivery of the work will meet City requirements.

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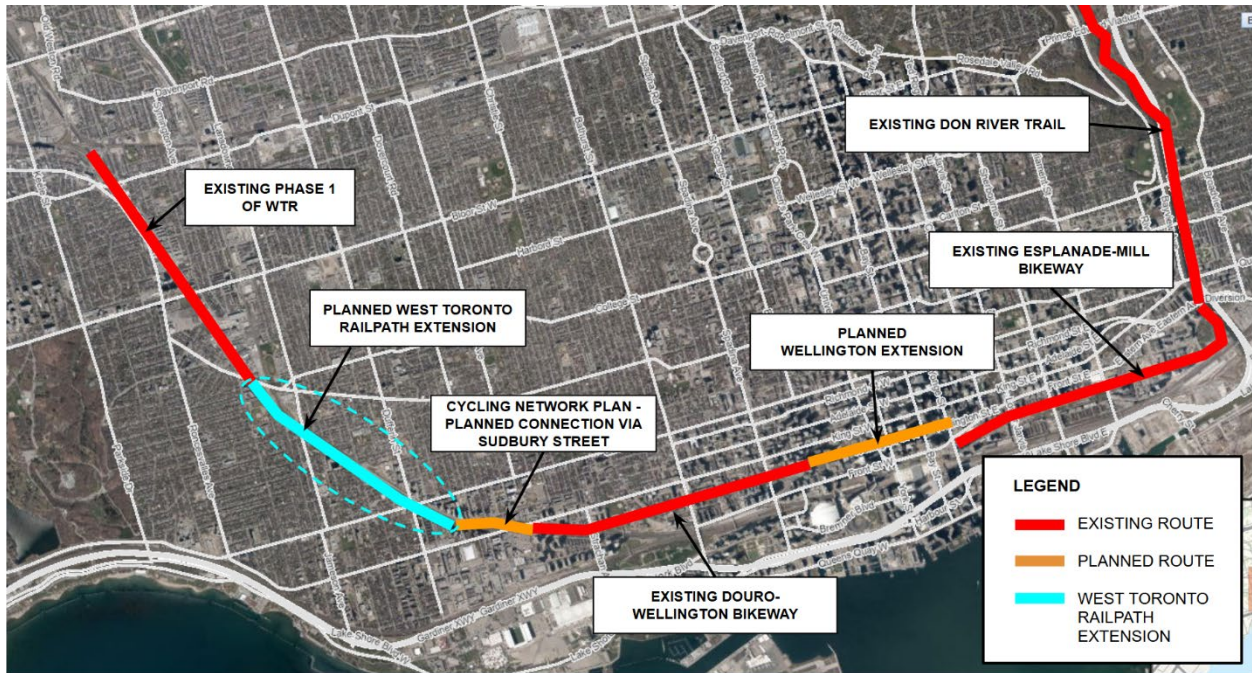
ATTACHMENTS

Attachment 1: Map of the Vital Role of the WTRPE in Connecting Toronto's Active Transportation Network

Attachment 2: Renderings of the West Toronto Railpath Extension

Attachment 3: History of Budget Approvals

Attachment 1: Map of the Vital Role of the WTRPE in Connecting Toronto's Active Transportation Network



Attachment 2: Renderings of the West Toronto Railpath Extension

Raised Segment Crossing the Barrie GO Rail Corridor



Community Connections



Attachment 3: History of Budget Approvals

Budget Year	Budget (million)	Overview of Request
2020	\$8 funded \$20 staged-gated in “Capital Needs Constraints” category	Transportation Services introduced the West Toronto Railpath as a new project, with \$8M budgeted to advance property acquisition for the West Toronto Railpath Extension, and \$20M identified as “Capital Needs Constraints”
2021	\$51	Transportation Services requested an increased budget to reflect update in property acquisition costs as well as inclusion of costs required for detailed design and construction.
2023	\$83.775	Transportation Services requested an increased budget to reflect updates in construction cost identified by Metrolinx. The increase is mainly attributed to escalating costs of construction, noise wall installation at four pedestrian bridges, cost of utility relocations, contaminated soil remediation, and mitigations to minimize noise and vibration disruptions during construction.
2024	\$149	Transportation Services requested an increased budget to reflect updates in tender-ready construction cost required by Metrolinx. The increase is mainly attributed to escalating costs of construction, Metrolinx Administrative Costs, and major utility relocations.