



## **Contract Amendment – Replacement of Rectifier and Rectifier Transformer Units**

**Date:** December 3, 2024

**To:** TTC Board

**From:** Chief Operations and Infrastructure Officer

### **Summary**

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The purpose of this report is to seek Board approval to amend Contract C58SA23360 Replacement of Rectifier – Rectifier Transformers by two years based on the extension option and increase the total contract amount by \$7,796,710.86, inclusive of HST, to cover expenditures associated with the procurement of rectifier and rectifier transformer units for years 2025 and 2026. TTC Board approval is required as this contract award exceeds the Chief Executive Officer's delegated authority threshold of \$2.5 million for contract amendments.

Rectifier and rectifier transformer units are key components for the supply of Direct Current (DC) traction power to TTC subway and surface vehicles. Failure of unreliable rectifier and rectifier transformer units may result in streetcar and subway service disruption. The scope of work includes the design, supply, installation, commissioning, and warranty of three rectifier and rectifier transformer units in 2025 and three rectifier and rectifier transformer units in 2026. This planned work is a part of the TTC's State of Good Repair (SOGR) Program to ensure reliable traction power for both subway and surface vehicles.

### **Recommendations**

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It is recommended that the TTC Board:

1. Authorize a contract amendment to Ainsworth Inc. for contract C58SA23360, Replacement of Rectifier – Rectifier Transformers, and increase the total contract amount by \$7,796,710.86, inclusive of HST, to a revised total of \$11,133,272.19, inclusive of HST, to cover the cost of six additional rectifier and rectifier transformer units as follows:
  - 2025 rectifier and rectifier transformer units for a total of \$3,669,052.00 for Duncan Substation (one) and Downsview Substation (two); and
  - 2026 rectifier and rectifier transformer units for a total of \$4,127,658.86 for Downsview Substation (one) and Glenayr Substation (two).

## Financial Summary

Based on the expected progress of work that includes the current work at Duncan Substation, Table 1 below summarizes the annual expenditure forecast between 2024 and 2026 to complete the replacement of rectifier and rectifier transformer units over the total contract term.

**Table 1: Contract Expenditure Forecast by Year and Total Term**

	<b>2024 Forecast (Installation currently in progress)</b>	<b>2025 Forecast</b>	<b>2026 Forecast</b>	<b>Total Contract Amount</b>
Contract Expenditure (without HST)	2,952,709.14	3,246,948.67	3,652,795.45	<b>9,852,453.27</b>
Non-Rebatable HST 1.76%	51,967.68	57,146.30	64,289.20	<b>173,403.18</b>
<b>Total Contract Expense</b>	<b>3,004,676.82</b>	<b>3,304,094.97</b>	<b>3,717,084.65</b>	<b>10,025,856.44</b>
Rebatable HST	331,884.51	364,957.03	410,574.21	<b>1,107,415.75</b>
<b>Total Authority, including HST</b>	<b>3,336,561.33</b>	<b>3,669,052.00</b>	<b>4,127,658.86</b>	<b>11,133,272.19</b>

Funds for this contract expenditure are included in the TTC's 2024-2033 Capital Budget and Plan under Program 2.1, Replace Rectifier Transformers, which was approved by the TTC Board at its meeting on December 20, 2023 and City Council on February 14, 2024. The 10-Year Capital Plan includes a total of \$18.1 million for the Replace Rectifier Transformers Program, comprising of the following cash flow funding by year as presented in Table 2:

**Table 2: 2024-2033 Capital Budget and Plan – 2.1 Replace Rectifier Transformers Program (\$000s):**

	<b>2024 Budget</b>	<b>2025</b>	<b>2026</b>	<b>2027</b>	<b>2028</b>	<b>2029-2033</b>	<b>10-Year Total</b>
Replace Rectifier Transformers	924.1	979.1	1,985.0	1,970.0	1,990.0	10,250.0	<b>18,098.2</b>

To accommodate the forecasted expenditure in 2024, an in-year budget adjustment was submitted through the Quarter 3 Variance Report to the City for City Council consideration and approval. Through the 2025 Budget process, the TTC is revising the 2025-2034 Capital Budget and Plan to align funding based on the planned scope and deliverables relating to this contract.

Based on the approved scope of this SOGR Program, the plan is to replace approximately three rectifier and rectifier transformer units per year. The initial contract (C58SA23360) award of \$3,336,561.33 was for the procurement of three rectifier and rectifier transformer units in 2024 that are currently being installed at Duncan Substation. The contract also included pricing for the optional design, supply, installation, commissioning, and warranty of six additional units (three per year) in 2025 and 2026 bringing the total contract value to \$11,133,272.19.

The Chief Financial Officer has reviewed this report and agrees with the financial impact information.

## **Equity/Accessibility Matters**

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The TTC is deeply committed to serving the needs of transit riders by providing a safe, reliable, efficient, and accessible mass public transit service through a seamless integrated network to create access to opportunity for everyone. Under the Capital State of Good Repair Program, the replacement of rectifier and rectifier transformer units with newer and reliable units will reduce the possibility of service disruptions.

## **Decision History**

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There is no previous Board decision history on this matter as approval of the initial contract was within the CEO's delegated authority.

## **Issue Background**

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Rectifier and rectifier transformer units are key components for the supply of Direct Current (DC) traction power to TTC subway and surface networks. In keeping with the TTC's Corporate Plan (Action 2.4) and SOGR Program, the rectifier and rectifier transformer replacement project schedule is to replace approximately three rectifier and rectifier transformer units per year. Through independent testing, the TTC has identified critical and high-priority locations for the 2024-2026 timeframe. The first location is Duncan Substation, which has four units in need of replacement. The TTC will then proceed to replace three units at Downsview Substation and two units at Glenayr Substation.

## **Comments**

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The scope of work consists of the design, supply, installation, commissioning, and warranty of rectifier and rectifier transformer units. Work is scheduled to be performed as follows:

2024: Duncan Substation (three units) – Base contract issued December 5, 2023.

Option years:

2025: Duncan Substation (one unit), Downsview Substation (two units).

2026: Downsview Substation (one unit), Glenayr Substation (two units).

Specification and drawings were prepared for Bid no. T58SA23360 and a Request for Bids (RFB) was posted on the TTC's website and MERX as of July 12, 2023. Twelve companies downloaded copies of the bid documents. Three companies attended the mandatory site tour held on July 19, 2023. Prior to the bid closing date of August 16, 2023, the three companies that attended the site tour were contacted to inquire if a bid would be submitted. Two of the companies indicated that they were subcontractors and would be providing pricing to Ainsworth Inc. as part of their bid. Ainsworth Inc. submitted a bid on MERX by the closing date of August 16, 2023.

Ainsworth Inc. submitted the only bid and did not state any exceptions. The Total Bid Price (for nine units) submitted by Ainsworth Inc. was found to be over the TTC's budget to perform the work. Therefore, a post-bid-close addendum was issued on November 6, 2023 that modified the pricing structure of the Request for Bid (RFB) whereby the base contract price would consist of the installation of the required units in 2024 and the TTC added options to order the remaining units needed in 2025 and 2026 at a later date, and at the bid pricing, subject to TTC budget approval.

As their amended bid was considered commercially acceptable, a contract was awarded to Ainsworth Inc. on December 5, 2023 in the amount of \$3,336,561.33, inclusive of HST, for the design, supply, installation, commissioning, and warranty of three rectifier and rectifier transformer units in 2024, with options to amend the contract to order 2025 and 2026 rectifier and rectifier transformer units at a later date.

Exercising the options to order the 2025 and 2026 rectifier and rectifier transformer units will ensure that the units identified as critical at high-priority locations are replaced within the 2024-2025 timeframe.

There have been significant changes in the global economy, including the impact of COVID-19, which has led to an increase in both raw materials and labour used to build rectifiers and rectifier transformers. In comparing a similar scope contract from 2019 to the current 2023 contract, the TTC has seen an approximate 71% increase in contract costs. A request to accelerate funding of \$8.5 million has been made in accordance with the 2025-2034 Capital Budget submission to pay for the projected expenses. Furthermore, a Capital Investment Plan (CIP) has been requested to ensure the Expected Final Cost (EFC) reflects the increases in contract costs.

## **Contact**

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## **Signature**

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