



**For Action  
with Confidential Attachment**

## **Audit, Risk and Compliance – 2024 Audit Plan Status Update**

**Date:** March 24, 2025

**To:** Audit & Risk Management Committee

**From:** Head of Audit, Risk and Compliance

### **Reason for Confidential Information**

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This report contains information related to the security of the property of the municipality or local board.

### **Summary**

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The Audit, Risk and Compliance Department (ARC) 2024 Audit Plan was presented and approved by the Audit & Risk Management Committee (ARMC) on November 14, 2023. The list of audit assurance projects identified for completion in 2024 is performed in addition to advisory and special requests subsequently put forward for ARC's consideration.

As of the date of this update, final reports have been issued for three 2024 projects. ARC has also essentially completed fieldwork and is progressing through the reporting phase for two other 2024 projects.

This report provides information with respect to ARC's progress on 2024 Audit Plan items, as well as details of the one final report issued since ARC's last update.

### **Recommendations**

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It is recommended that the Audit & Risk Management Committee:

1. Receive this report for information; and
2. Receive the Confidential Attachment and authorize that the information contained in the Confidential Attachment remain confidential as it relates to the security of the property of the municipality or local board.

## **Financial Summary**

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The implementation of the 2024 Audit Plan has no funding implications beyond the costs of the ARC Department that were included in the 2024 Operating Budget approved by the TTC Board on December 20, 2023, and by the City Council on February 14, 2024.

The Executive Director – Finance has reviewed this report and agrees with the financial impact information.

## **Equity/Accessibility Matters**

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The independent assurance and advisory work of ARC supports TTC leadership efforts to continuously improve controls and integrate risk management into processes that drive the achievement of corporate goals and objectives, including equity, diversity, inclusion, and accessibility (EDIA).

## **Decision History**

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The 2024 Audit Plan was presented and approved by the Audit & Risk Management Committee on November 14, 2023.

[Audit, Risk and Compliance \(ARC\) – 2024 Audit Plan](#)

## **Issue Background**

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The Audit & Risk Management Committee (ARMC) assists the TTC Board in fulfilling its oversight responsibilities in several areas including: audits, a system of internal control, compliance with laws and regulations, and enterprise risk management activities.

While it is the responsibility of TTC business areas to formulate policies and enforce compliance with plans and strategies, ARC can support those directly accountable for ensuring such plans achieve their stated objectives by providing management with independent assurance or function in an advisory capacity.

## **Comments**

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Planned assurance projects are performed in accordance with ARC's annual Work Plan, as approved by the ARMC. Each project is completed in three phases – Planning, Fieldwork, and Reporting. Once management responses and corrective action plans to address ARC recommendations have been prepared, the full report is formally issued to the TTC Chief Executive Officer, Deputy Chief Executive Officer, and all applicable internal stakeholders, and the project is considered to have been completed.

## Status Update – 2024 Planned Audit Projects

#	Project Name	Status
1	Actuarial Reserves – Claims	Completed
2	Elevator Maintenance	Completed
3	IT General Controls – Operational Technology Governance and Access Controls	Completed
4	Capital Expenditures – Capital Project Portfolio Review	Reporting
5	Station Passenger Intercoms	Reporting
6	Hiring, Onboarding and Retention of Non-Operators	Cancelled

ARC has completed three 2024 audit projects (review of TTC Actuarial Reserves, Elevator Maintenance, and IT General Controls). ARC has also essentially completed fieldwork and is progressing into the reporting phase for two other 2024 projects (review of Capital Expenditures and Station and Passenger Intercoms). ARC's planned review of recruitment and retention processes for non-Operators was initially deferred to avoid interfering with the TTC Workforce Review being conducted by the City of Toronto Auditor General (AG). Now, based on ARC's review of the AG's final results and recommendations from its completed work, the anticipated incremental value of ARC conducting another detailed internal audit in this area in the near future is limited, and so this project will not be carried forward into the 2025 Work Plan, allowing TTC Management to focus its efforts on addressing areas of concerns reported recently by the AG, as well as on ARC recommendations outlined in the Operator Hiring, Onboarding and Retention Audit Report issued in January 2024.

Finally, ARC continues to support and respond to special requests from TTC Executives and Senior Management, while balancing ARC staff capacity and value to the organization. Results are shared with applicable management, and ARC facilitates necessary discussions among all key stakeholders to support appropriate actions in response to critical observations and insights.

## Completed Assurance Reviews Results – ARC High-Level Commentary

Background details and extracts from the report issued by ARC since our last quarterly update are provided in Confidential Attachment 1. For this one completed Assurance Review, ARC offers the following supplementary comments:

### ARC Review (issued February 2025) – Operational Technology (OT) Governance and Access Controls

*Rationale for Audit:* Cybersecurity threats to transit systems are a major concern, as cyberattacks targeting transportation networks have been reported in recent years, and so ARC wanted to initiate independent assurance work in this area. Although in 2022 and 2023, the City of Toronto Auditor General conducted cybersecurity audits at the TTC that included some aspects of operational technology (OT) cybersecurity, ARC focused its review on the fundamentals of the TTC's OT governance and access

controls for cybersecurity to provide valuable insights and to help management prioritize improvements designed to enhance the OT cybersecurity practices.

*Overall Key ARC Observations/Recommendations:* The audit determined that management of the Signals, Electrical, and Communication (SEC) Department within the Operation and Infrastructure Group requires improvement to enhance the cybersecurity practices. Specifically, issues were noted in the following areas:

- Roles in Managing OT Cybersecurity
- Policies and Operating Procedures
- Asset Tracking
- Physical Access Controls
- End-Point Security
- Logical Access Controls
- Senior Management Governance
- Corporate Cybersecurity Policies
- Cybersecurity Training

*Management Action Plans:* Management has committed to the following actions to address the identified risks and enhance OT cybersecurity across the TTC.

Management will increase dedicated resources and enhance senior leadership's involvement in OT cybersecurity, ensuring it receives the necessary attention and prioritization. Both physical and logical access to OT systems will be improved to align with best practices, reducing vulnerabilities and strengthening system security. Controls will also be strengthened to protect devices used to connect to OT networks, ensuring that only authorized devices are permitted to access these networks.

Efforts are underway to improve asset tracking information, providing more accurate and comprehensive data to support effective OT cybersecurity management. Collaboration with the Information Security team will also be improved, focusing on engaging corporate cybersecurity policies that provide clear guidance and enable joint governance of OT cybersecurity practices.

In addition, Management will reestablish best practices for documenting and updating departmental policies and operating procedures, ensuring clarity and consistency. A deeper understanding of the financial, operational, reputational, and safety impacts of potential cyberattacks on OT systems will be undertaken to improve the protection of these systems and enhance response readiness.

Finally, Management has committed to enhancing training programs, targeting specialized scenarios involving OT cyberattacks to ensure personnel are better equipped to detect and respond to these risks effectively.

## **Auditor General Recommendations – ARC’s Ongoing Support and Dashboard**

### *Fully Implemented (FI) Recommendations*

ARC continues to work with TTC Senior Leadership to improve the acceptance rate of Management’s FI submissions by the City of Toronto’s Auditor General (AG) following the agreed upon process outlined in the first flowchart of Attachment 2. Specifically, for each FI submission, ARC assesses the adequacy of the response and the sufficiency of evidence submitted into the AG’s TeamMate system to support Management’s position. This assessment involves reviewing both the AG’s original reports and any comments provided during subsequent follow-up reviews and clarification discussions (see Attachment 3 for key considerations of what may be required by the AG to validate a FI assessment). This assessment process can be complex, particularly when there has been staff turnover since the initial AG audit report was issued.

Upon completing our preliminary assessment, ARC staff provides feedback to Management, including explanations for any items where, in ARC’s opinion, meeting the AG’s expectations is unlikely. In such cases, ARC encourages Management to either provide further justification and supporting evidence or to revise its position and timeline for expected completion.

As of March 7, 2025, a total of 35 FI submissions have been submitted by Management into TeamMate (see Attachment 5 – *ARC’s Dashboards: Status of TTC’s AG Recommendations*). Based on ARC’s review to date and understanding of the AG’s expectations for these items, it is our opinion that:

- 17 are reasonably supported;
- 18 require further ARC review and discussion with applicable Management.

### *In-Progress (IP) Recommendations*

As part of the TTC’s ongoing efforts to reduce the number of outstanding AG recommendations, ARC collaborates with relevant Management to ensure they understand the original AG’s observation, and the intent behind the recommendations and any follow-up comments or additional expectations from the AG. Through discussions, ARC prompts Management to critically evaluate whether completed and remaining planned actions, as currently articulated in TeamMate, sufficiently address the intent of the AG’s recommendations and whether the reported target timelines for completion are realistic (see the second flowchart in Attachment 2).

As of March 7, 2025, TeamMate data identifies 65 items as IP. Due dates reflect Management’s best estimate for achieving full implementation and meeting the AG’s expectations.

As a going-forward process improvement and with Management’s consent, the AG will provide drafts of their completed TTC audit reports to ARC after independently vetting their audit results with TTC Senior Management. This proactive sharing by the AG will

facilitate ARC's efforts to support Management in formulating reasonable responses and corrective action plans for inclusion in the AG's final audit report in a timely manner. However, due to the complexity of certain observations and the AG's expectation for comprehensive solutions to address noted recommendations, these initial Management responses may only describe high-level action plans and speak in broad terms. These plans will be refined over time, and an estimated percentage of completion for each action plan will be regularly reported in TeamMate in a consistent manner (see Attachment 4 for a description of percentage completion options as defined by ARC and discussed with the AG).

ARC will continue to support Management's efforts to close all outstanding AG recommendations and will keep the ARMC informed via Dashboard Reporting. Given the significant efforts required on the part of ARC staff to complete this work, all related activities collectively have been identified as an ongoing project in ARC's 2025 Work Plan.

## **Contact**

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## **Signature**

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Viraj Chandrakanthan, Head – Audit, Risk and Compliance

## **Attachments**

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Confidential Attachment 1 – ARC – Extracts of Issued ARC Reports

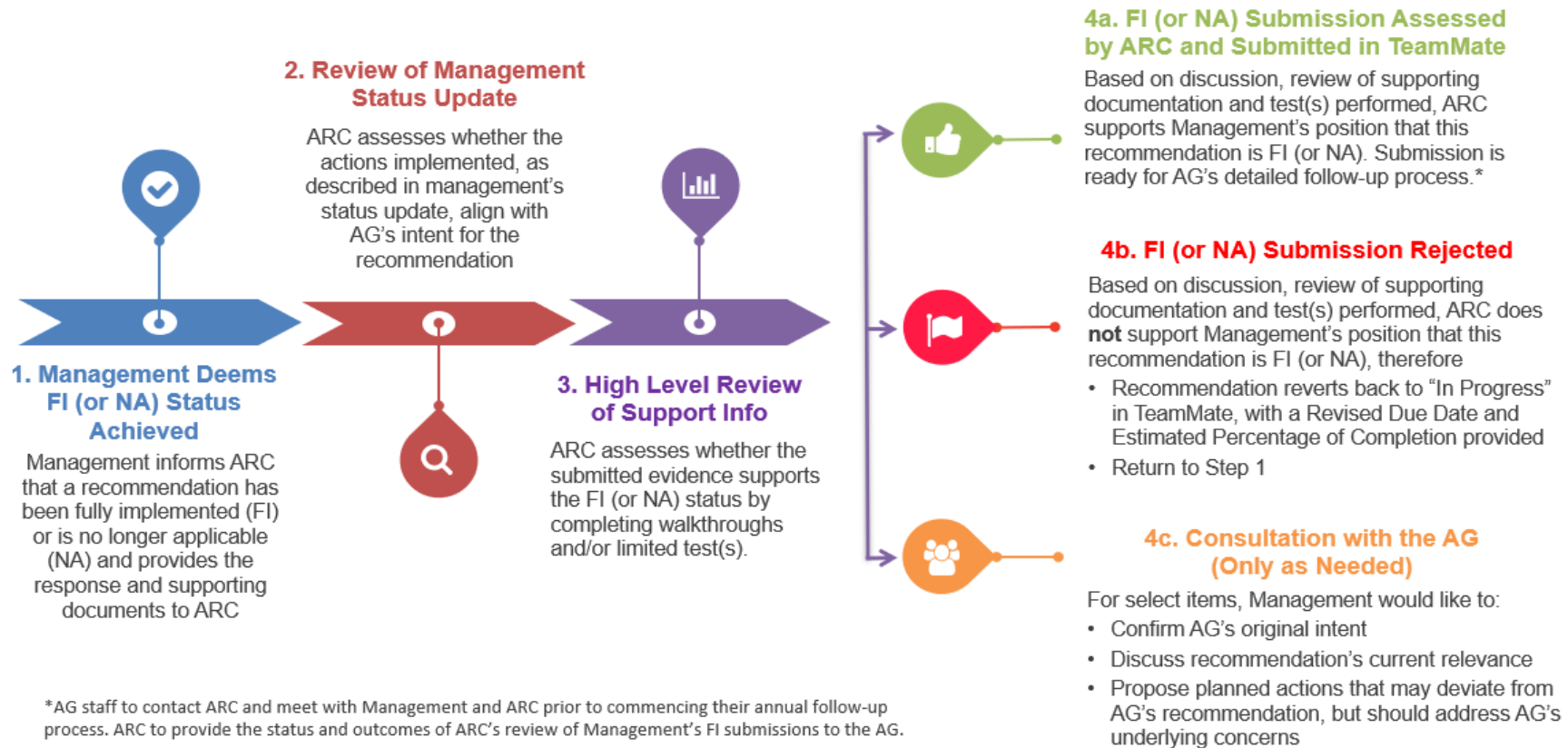
Attachment 2 – AG Recommendations – ARC Facilitation Processes

Attachment 3 – Guidelines for Management – Considerations for Assessing When an AG Recommendation is Fully Implemented

Attachment 4 – Guidelines for Management – Considerations for Assessing Percentage Completed for In Progress Items

Attachment 5 – ARC's Dashboards: Status of TTC's AG Recommendations

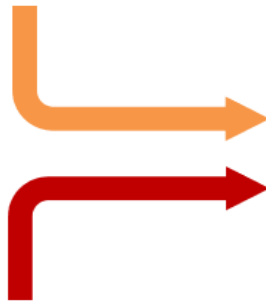
## ARC Facilitation – Fully Implemented or No Longer Applicable Recommendations



## ARC Facilitation – In Progress and New AG Recommendations

### In Progress Recommendations from Issued AG Reports

Recommendations deemed by Management to be still “In Progress” (not fully implemented)



### New Recommendations from Final Draft of an AG Report

ARC to support Management's preparation of responses to new AG recommendations. AG to share final draft report with Management and ARC concurrently



#### Understand AG's Intent

Ensure Management and ARC have an aligned understanding of the AG's observations and original intent underlying each recommendation.



#### Facilitate Discussions with AG's Office (Only as Needed)

ARC will facilitate discussions with the AG on select items to:

- Confirm Management and ARC's understanding of AG's original observation and/or intent underlying the recommendation
- Obtain AG's feedback on Management's completed and/or planned actions
- Discuss potential actions that deviate from AG's recommendation while addressing AG's underlying concerns

#### Support Management's Implementation of the AG Recommendations

For **in-progress** recommendations, ARC to review with Management:

- Actions taken to date
- Other actions planned
- Projected completion date
- Percentage of completion
- Challenges and causes of delay



For **new** recommendations, ARC to support Management with the preparation of Management Responses to ensure:

- Timely submission to the AG
- Action plans and implementation timelines are realistic
- Accountable Chief and Owner are identified



#### Reporting to the ARMC

Periodically update the TTC Audit Risk & Management Committee (ARMC) regarding Management's progress to implement AG recommendations



## Guidelines for Management – Considerations for Assessing When an AG Recommendation is FI

Developed by ARC based on discussions with the AG as to what potentially qualifies a recommendation as Fully Implemented (FI). These examples serve only as general guidance and the achievement of FI status will be assessed on a case-by-case basis.

Considerations	Examples
Is there supporting documentation to demonstrate that the recommendation has been implemented?	<ul style="list-style-type: none"> <li>• Policy or procedure document.</li> <li>• Report and/or metrics developed to monitor outcomes, improvements, savings or efficiencies resulting from actions taken.</li> </ul>
<p>Has the solution been consistently implemented throughout the organization and/or the applicable cost centres/locations/departments/groups?</p> <p>Is there demonstrable compliance with the new policy, process or procedure?</p>	<ul style="list-style-type: none"> <li>• Evidence of policy/procedure communication and/or training.</li> <li>• Evidence of continuous enforcement and monitoring.</li> </ul>
Has the implemented solution been in place for a sufficient amount of time to allow the AG to assess the adequacy of the actions taken?	<ul style="list-style-type: none"> <li>• Allow 3-6 months for a new process or procedure—and 6-12 months for a new system/program—to become fully operational so management could assess its performance/impact.</li> </ul>
<p>Were the actions taken effective in addressing the issues/risks identified in the AG report?</p> <p>If AG's testing/calculation is re-performed, would it yield an improved outcome compared to that at the time of AG's initial audit?</p>	<ul style="list-style-type: none"> <li>• Reduced processing or turnaround times.</li> <li>• Recovery of overpayments.</li> <li>• Reduced expenditure (i.e., savings).</li> <li>• Improved decision making.</li> </ul>
The AG requires updated supporting evidence for older FI submissions already made in TeamMate but still awaiting their verification, despite the delay in review being due to the AG's prioritization of other FI submissions.	<ul style="list-style-type: none"> <li>• The reports and KPIs submitted in TeamMate as supporting evidence are still being generated and actively used to inform decision-making, and they are expected to continue being utilized in the foreseeable future.</li> </ul>

## Guidelines for Management – Considerations for Assessing Percentage Completed for In Progress Items

These examples serve only as general guidance; Management to assess implementation progress based on actual circumstances.

25%

### Planning or preliminary actions initiated, for example:

- Started to expand and refine the high-level action plan provided to the AG for inclusion in their final audit report.
- Secured approval from Senior Management & Chief on the detailed action plan and the target completion date.
- Determined stakeholders' roles, responsibilities, and the key milestones necessary for achieving the overall target completion date.
- Identified the interdependencies that may facilitate or impede implementation progress and established strategies to manage them.
- Initiated analysis to explore potential options or outcomes.
- Began preparation of proposal and justification necessary for obtaining any required funding.

50%

### Implementation is in progress, for example:

- SOP, KPI or reporting development or drafting is underway.
- Operational process has been implemented or adjusted in accordance with the approved action plan.
- New equipment/technology/process has been applied to some applicable locations/assets, with others pending.
- Analysis to explore potential options or outcomes has been completed and next step actions identified or initiated.
- Funding required to implement planned actions have been received.
- External vendor has been engaged to support recommendation's implementation, where needed, and work is underway.

75%

### Ongoing monitoring established and results are beginning to materialize, for example:

- SOP, KPI or reporting has been finalized, communicated and operationalized.
- New equipment/technology/process has been applied to all applicable locations/assets.
- Actions and considerations from external vendor have been implemented.
- Actions taken are starting to yield an improved outcome compared to that at the time of the AG's initial audit.
- Management has established the means to assess the adequacy/impact of a new equipment/technology/process operationalized.

**Note:** TeamMate requires the selection of one of the above three options for In Progress items.

## Overview of All AG Recommendations – As of March 7, 2025 per TeamMate

AG Audit	Accountable Chief(s)	In Progress	Fully Implemented per Mgmt & Pending AG's Verification	Accepted & Closed by the AG	Total
(2012-12-06) Review of Wheel-Trans Services				2	2
(2016-05-12) Materials and Procurement Phase One Report				5	5
(2016-09-21) CCM Employee Overtime and Absenteeism				1	1
(2018-09-17) Management of Core Components (Management Letter)				6	6
Other – Confidential Reviews				6	6
(2014-01-28) Bus Maintenance Phase One Report	Rich Wong (CTVO)	1		6	7
(2015-02-06) Bus Maintenance Phase Two Report	Rich Wong (CTVO)	4	1	5	10
(2017-05-15) Procurement Report Materials Mgmt & Purchasing Policies	CFO	6		13	19
(2017-09-15) Accounts Payable	CFO	1	4	2	7
(2017-10-13) June 29 2016 Briefing Note	Mike Atlas (GC)		2		2
(2018-01-31) Procurement Report Wheel-Trans Taxi Services	CFO		4		4
(2018-05-18) Telecommunication Report	CFO		1	12	13
(2018-06-26) Employee Expenses and Reward Program Report	Shakira Naraine (CPCO) CFO Josh Colle (CSCEO) Mike Atlas (GC)	7	11	2	20
(2019-02-21) Revenue Operation Phase One Fare Evasion	Josh Colle (CSCEO)	16	3	8	27
(2019-10-21) Revenue Operation Phase Two PRESTO Report	Josh Colle (CSCEO)	6	4	24	34
(2023-11-03) Audit of the TTC's Streetcar Overhead Assets	Fort Monaco (COIO)	20			20
Other – Confidential Reviews		4	5		9
		65	35	92	192

### Note

- Table reflects all AG recommendations tracked via AG's TeamMate system since its implementation at the TTC in August 2020; AG recommendations issued in 2025 are not yet reflected in TeamMate.
- While each accountable Chief will lead the implementation of their group's recommendations, input and support from other TTC groups may be required.
- All recommendations closed per the AG as either being fully implemented or considered no longer applicable reflected in green.

## Overview of All AG Recommendations – As of March 7, 2025 per TeamMate

AG Audit	25%	50%	75%	100%	Total
(2012-12-06) Review of Wheel-Trans Services				2	2
(2016-05-12) Materials and Procurement Phase One Report				5	5
(2016-09-21) CCM Employee Overtime and Absenteeism				1	1
(2018-09-17) Management of Core Components (Management Letter)				6	6
Other – Confidential Reviews				6	6
(2014-01-28) Bus Maintenance Phase One Report			1	6	7
(2015-02-06) Bus Maintenance Phase Two Report		1	3	6	10
(2017-05-15) Procurement Report Materials Management and Purchasing Policies		3	3	13	19
(2017-09-15) Accounts Payable			1	6	7
(2017-10-13) June 29 2016 Briefing Note				2	2
(2018-01-31) Procurement Report Wheel-Trans Taxi Services				4	4
(2018-05-18) Telecommunication Report				13	13
(2018-06-26) Employee Expenses and Reward Program Report	6		1	13	20
(2019-02-21) Revenue Operation Phase One Fare Evasion		2	14	11	27
(2019-10-21) Revenue Operation Phase Two PRESTO Report			6	28	34
(2023-11-03) Audit of the TTC's Streetcar Overhead Assets	20				20
Other – Confidential Reviews	4			5	9
	30	6	29	127*	192

\* Total of 127 includes 92 items accepted and closed by the AG and 35 items deemed to be Fully Implemented by Management and pending AG's verification.

## AG Recommendations by Priority Classification – As of March 7, 2025 per TeamMate

### Fully Implemented per Management Pending AG Verification – By Priority

AG Audit	Savings	Outstanding > 5 yrs	High Priority - Other	Not Deemed High Priority	Total
(2015-02-06) Bus Maintenance Phase Two Report		1			1
(2017-09-15) Accounts Payable	1	3			4
(2017-10-13) June 29 2016 Briefing Note		2			2
(2018-01-31) Procurement Report Wheel-Trans Taxi Services		4			4
(2018-05-18) Telecommunication Report		1			1
(2018-06-26) Employee Expenses and Reward Program		11			11
(2019-02-21) Revenue Operation Phase One Fare Evasion	2	1			3
(2019-10-21) Revenue Operation Phase Two PRESTO Report				4	4
Other – Confidential Reviews			5		5
	3	23	5	4	35

### In Progress – By Priority

AG Audit	Savings	Outstanding > 5 yrs	High Priority - Other	Not Deemed High Priority	Total
(2014-01-28) Bus Maintenance Phase One Report		1			1
(2015-02-06) Bus Maintenance Phase Two Report		4			4
(2017-05-15) Procurement Report Materials Mgmt & Purchasing Policies	4	2			6
(2017-09-15) Accounts Payable		1			1
(2018-06-26) Employee Expenses and Reward Program	2	5			7
(2019-02-21) Revenue Operation Phase One Fare Evasion	7	9			16
(2019-10-21) Revenue Operation Phase Two PRESTO Report	4			2	6
(2023-11-03) Audit of the TTC's Streetcar Overhead Assets	2		8	10	20
Other – Confidential Reviews			4		4
	19	22	12	12	65

## In Progress Items & Due Dates – As of March 7, 2025 per TeamMate

AG Audits with In Progress Items	2025 Qtr2	2025 Qtr3	2025 Qtr4	2026 Qtr1	2026 Qtr2	2026 Qtr3	2026 Qtr4	2027+	Total
(2014-01-28) Bus Maintenance Phase One Report			1						1
(2015-02-06) Bus Maintenance Phase Two Report			4						4
(2017-05-15) Procurement Report Materials Mgmt and Purchasing Policies		1	2			1	2		6
(2017-09-15) Accounts Payable	1								1
(2018-06-26) Employee Expenses and Reward Program Report	1		6						7
(2019-02-21) Revenue Operation Phase One Fare Evasion	15		1						16
(2019-10-21) Revenue Operation Phase Two PRESTO Report	5		1						6
(2023-11-03) Audit of the TTC's Streetcar Overhead Assets								20	20
Other – Confidential Reviews			2		2				4
	22	1	17	0	2	1	2	20	65

## Progress of ARC's Review of Fully Implemented Submissions – As of March 7, 2025

AG Audit	ARC Review In Progress (Note 1)	FI supported by ARC	Total
(2015-02-06) Bus Maintenance Phase Two Report	1		1
(2017-09-15) Accounts Payable	4		4
(2017-10-13) June 29 2016 Briefing Note		2	2
(2018-01-31) Procurement Report Wheel-Trans Taxi Services		4	4
(2018-05-18) Telecommunication Report	1		1
(2018-06-26) Employee Expenses and Reward Program Report	7	4	11
(2019-02-21) Revenue Operation Phase One Fare Evasion		3	3
(2019-10-21) Revenue Operation Phase Two PRESTO Report		4	4
Other – Confidential Reviews	5		5
	18	17	35

**Note 1** – ARC has provided feedback to Management on the additional explanations and evidence needed to be input into TeamMate to support a Fully Implemented status. Once these further submissions are made, ARC will complete its final assessment.