

Eglinton Crosstown LRT

Progress Update

SEPTEMBER 27, 2023

PROJECT OVERVIEW

- Eglinton Crosstown LRT (ECLRT) is a complex project that has experienced several challenges during its build and, over the last months, during the testing and commissioning phase.
- Some of the challenges and delays to the opening of Eglinton Crosstown resulted from Crosslinx Transit Solutions (CTS) being more than a year late in some of the design work for the project, delays from COVID-19, and delays from significant repairs needed on the existing Yonge-Eglinton subway station box.
- CTS has worked closely with Metrolinx to develop and use an improved schedule that now includes all the appropriate activities, scope, dependencies, and linkages. This schedule will be updated every month as risks and new rectification works are identified.
- Construction of the physical asset itself is almost complete, however there remains extensive testing and commissioning of the transit systems to ensure these were designed, developed, and installed correctly and that these integrate into the overall LRT system. This testing and commissioning is currently underway, but CTS has taken longer than anticipated.
- The testing and commissioning phase of a transit project is when faults or issues are found and fixed. What is found and how long it takes to rectify is unpredictable, which is why Metrolinx is not prepared to provide a projected opening date for Eglinton Crosstown LRT yet. However, Metrolinx undertakes to do technical briefings and inform the public every two months on progress and Metrolinx will declare an opening date once these risks from the testing and commissioning phase are mitigated.

DASHBOARD OVERVIEW

As a part of this briefing process, Metrolinx will provide updates on the four main work streams that are currently the most critical to the project reaching completion:

- Testing and commissioning
- Certification of design
- Remaining construction
- Certifying stations and facilities for safe occupancy

As CTS progresses with each one of these four work streams, there will be less unexpected risks remaining in the overall schedule.

Updates on other workstreams such as operator training will be added at later briefings.

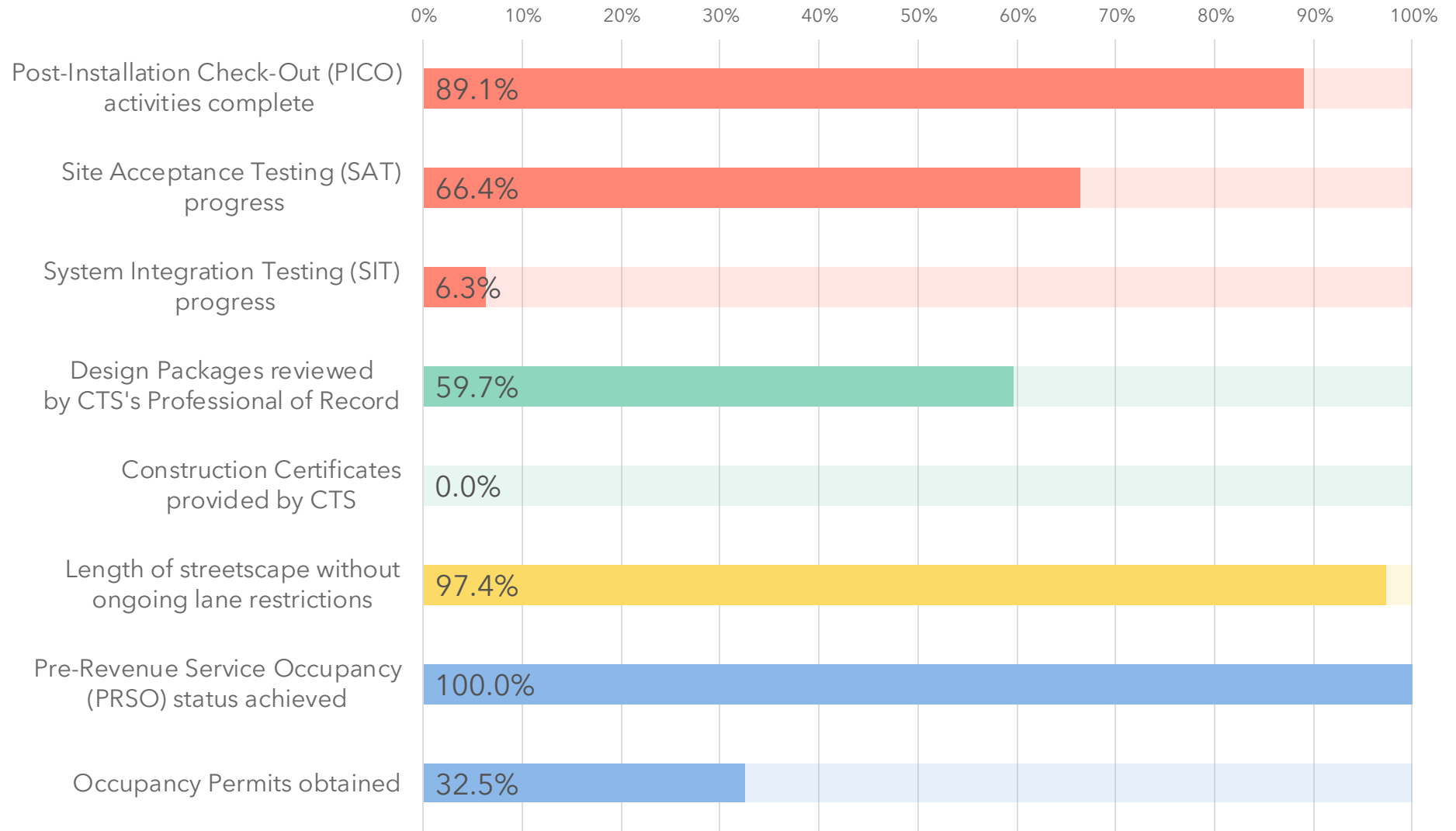
PROJECT DASHBOARD/FOUR MAIN WORK STREAMS

TESTING AND COMMISSIONING

CERTIFICATION OF DESIGN

REMAINING CONSTRUCTION

CERTIFYING STATIONS AND FACILITIES FOR SAFE OCCUPANCY



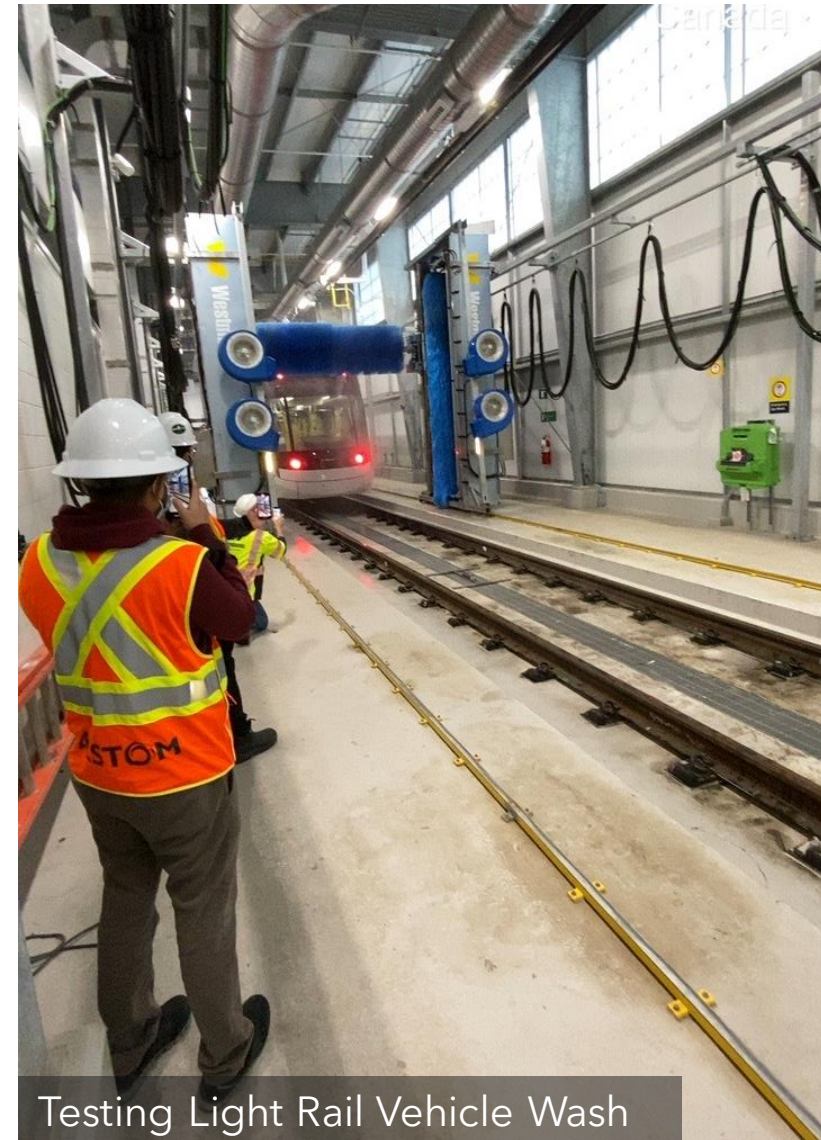
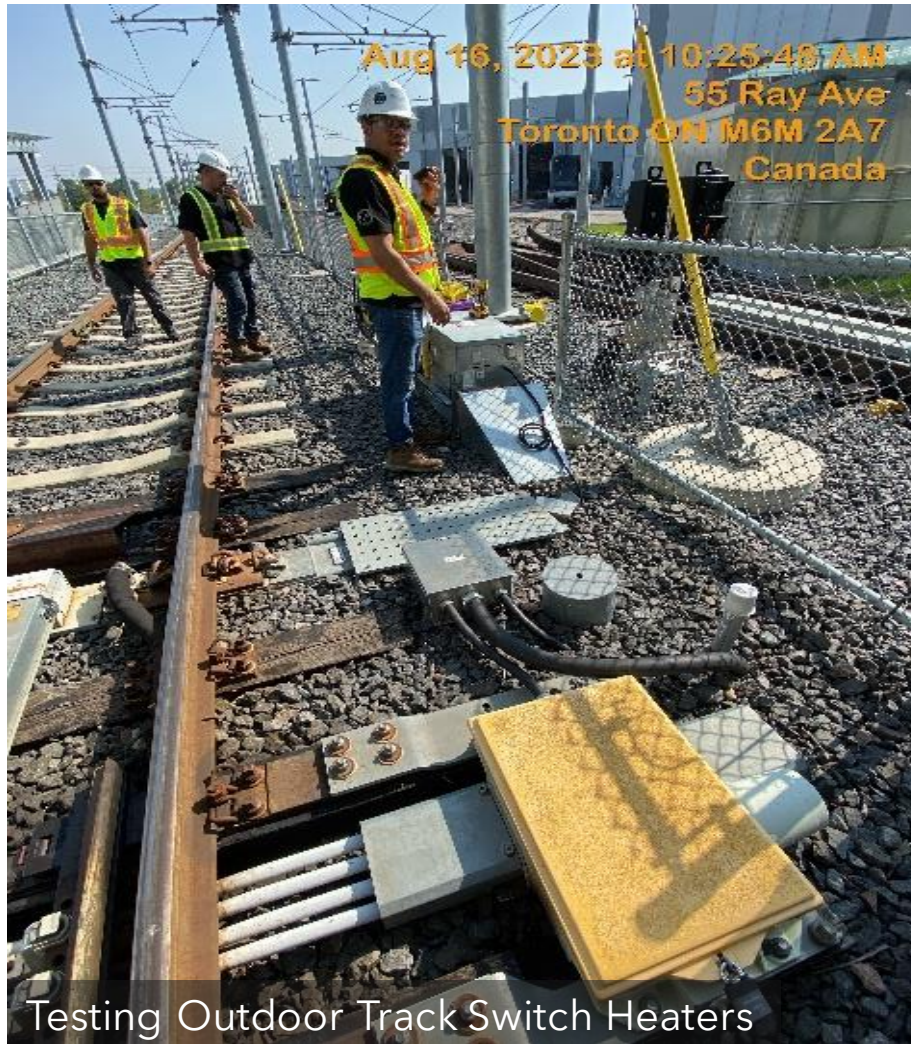
UNDERLYING CAUSES OF SCHEDULE DELAY



TESTING & COMMISSIONING

- A rigorous testing and commissioning regime is required, and until this is independently confirmed as complete, the project is not ready to carry passengers safely and reliably.
- The testing and commissioning process comprises a series of distinct testing programs. As reported by CTS, those include:
 - Post-Installation Check-out (PICO) tests, for 40,991 assets, of which 36,521 (**89%**) are currently complete
 - Site Acceptance Testing (SAT), for 35,482 assets, of which 23,553 (**66%**) are currently complete
 - 978 System Integration Test (SIT) activities, of which 62 (**6%**) are currently complete
- Some tests are naturally expected to prompt rectification efforts and need to be redone. This results in a high degree of unpredictability to testing timelines.
- As completed tests approach 100%, our ability to project to an opening date will improve.

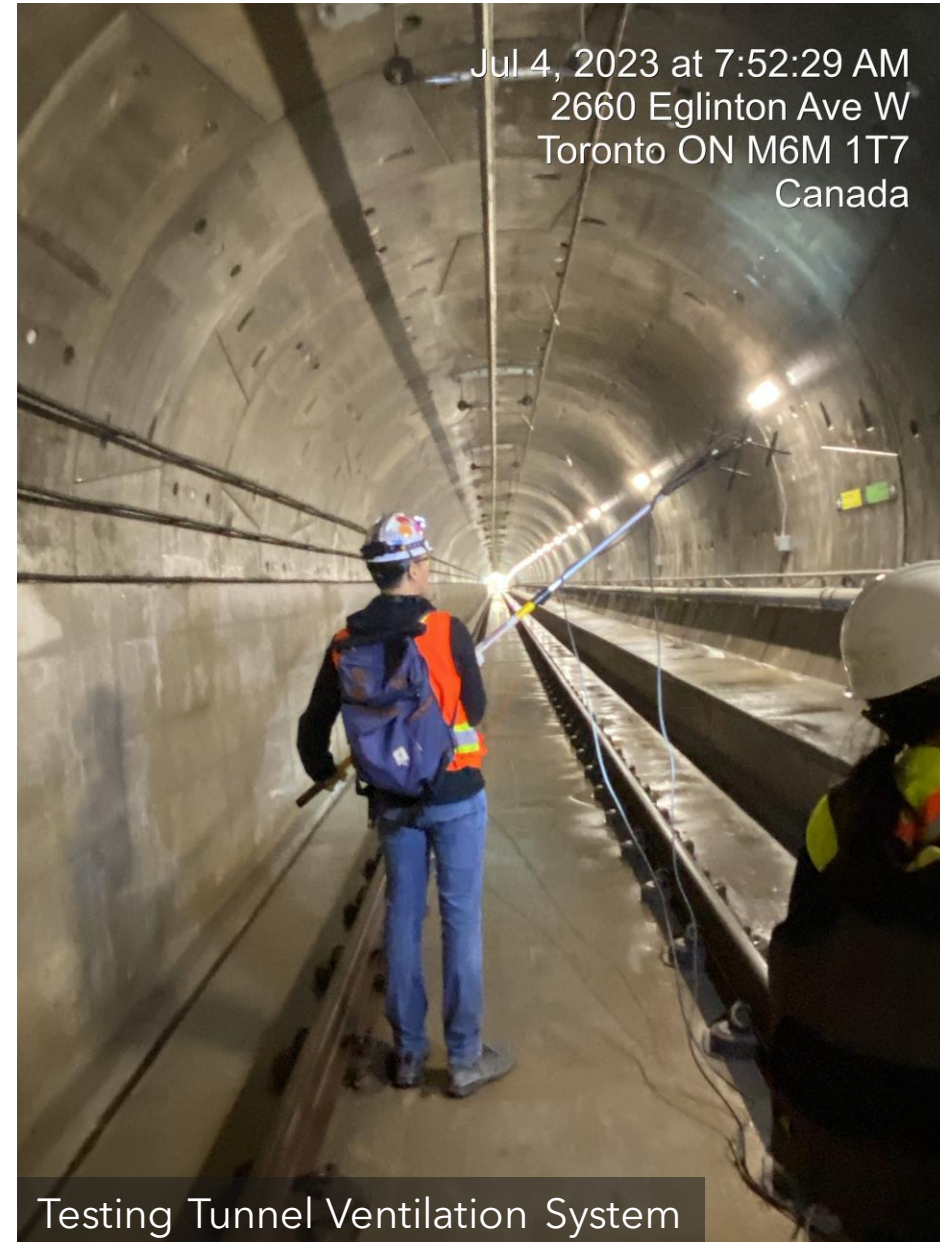
TESTING & COMMISSIONING



TESTING & COMMISSIONING



Testing Audibility of Station Announcements

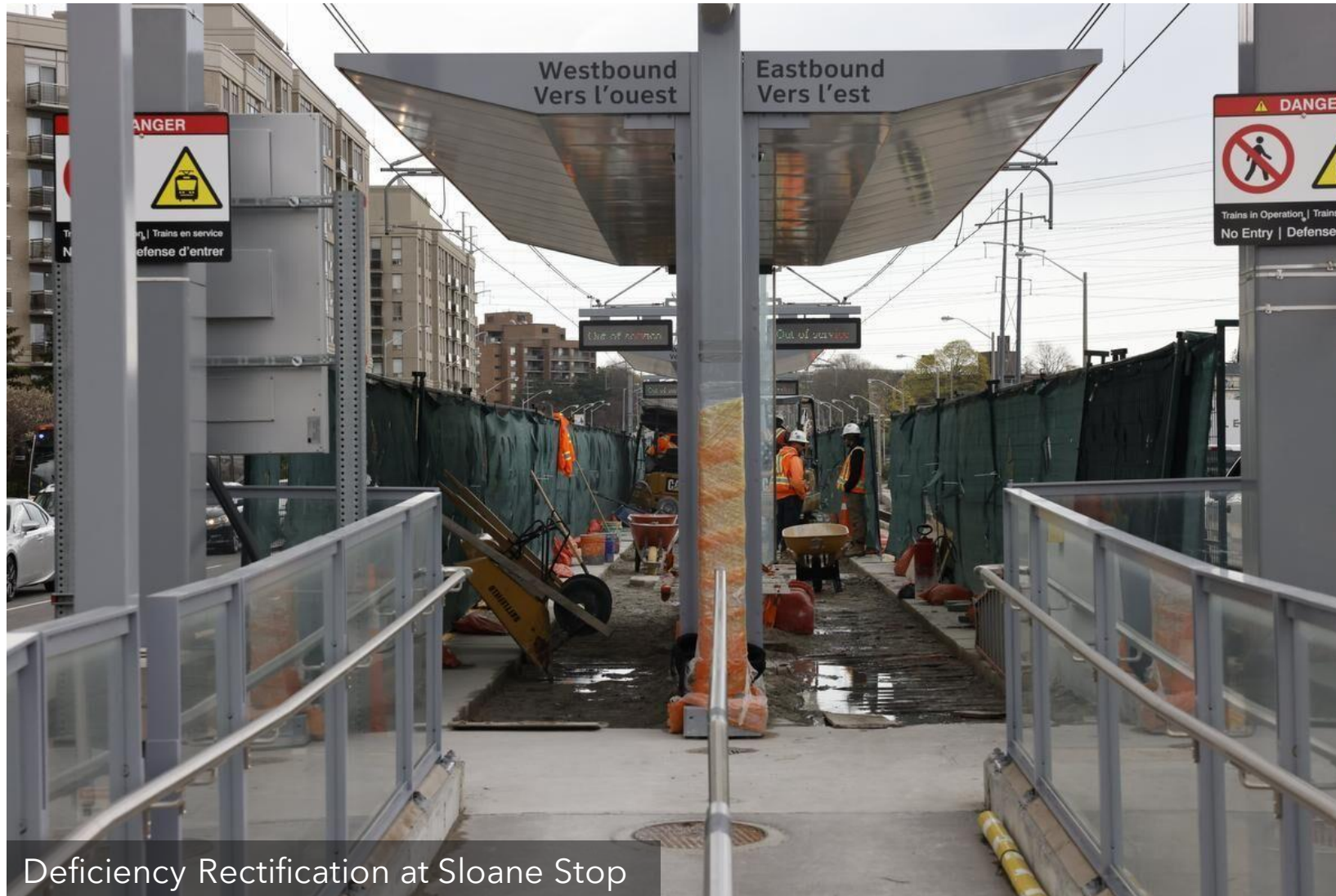


Testing Tunnel Ventilation System

DEFICIENCY RECTIFICATION AND CERTIFICATION OF DESIGN

- Deficiencies and non-conformances
 - Non-conformances progressively being closed, down from 260 previously
 - Deficiency identification and rectification is expected on a large, complex project
 - Deficiencies are to be rectified by CTS within the fixed price they bid
- Key deficiencies that are in the process of rectification by CTS:
 - Track gauge - CTS has made many adjustments enabling Operator Training to safely resume; full rectification continues
 - Water ingress in underground stations - CTS responding by injecting grout into the adjacent earth
 - Sloane platform with pooling water - CTS broke up the platform surface and re-poured
- Finished construction must be validated against design by CTS's Professional of Record (PoR) and then presented to Metrolinx and the Independent Certifier for their review and acceptance
 - To date, 307 of 514 packages (**60%**) have been reviewed and signed off by CTS's PoR
- These packages will then culminate in 46 Construction Certificates - to be provided

DEFICIENCY RECTIFICATION AND CERTIFICATION OF DESIGN



Deficiency Rectification at Sloane Stop

DEFICIENCY RECTIFICATION AND CERTIFICATION OF DESIGN



CTS working on track alignment issues

REMAINING CONSTRUCTION

- While physical construction is nearly complete, all the systems and assets must work as an integrated transit solution.
- Of the 19 km alignment, more than 18.5 km is complete to point of no remaining ongoing lane closures or obstruction of storefronts:
 - In late August, lane restrictions lifted over a ~400 m stretch between Avenue Rd and Lascelles Ave where CTS was installing upgraded watermains requested by the City and a new streetscape;
 - Only a ~400m stretch at Yonge & Eglinton (from Duplex to Dunfield) now remains restricted, with the following physical construction outstanding:
 - Finishing the layer between the top of the underground station structure and street:
 - Reinstallation of all underground utilities in final configuration
 - Removal of temporary road decks and backfilling
 - Reinstatement of final road surface and sidewalks
 - Final elements of underground connections between Eglinton Station and third-party-owned adjacent developments

REMAINING CONSTRUCTION



Yonge & Eglinton,
View W towards Duplex Ave



Yonge & Eglinton,
View E across Yonge

REMAINING CONSTRUCTION



Interior of Eglinton Station: New concourse level below subway platform and above LRT platform

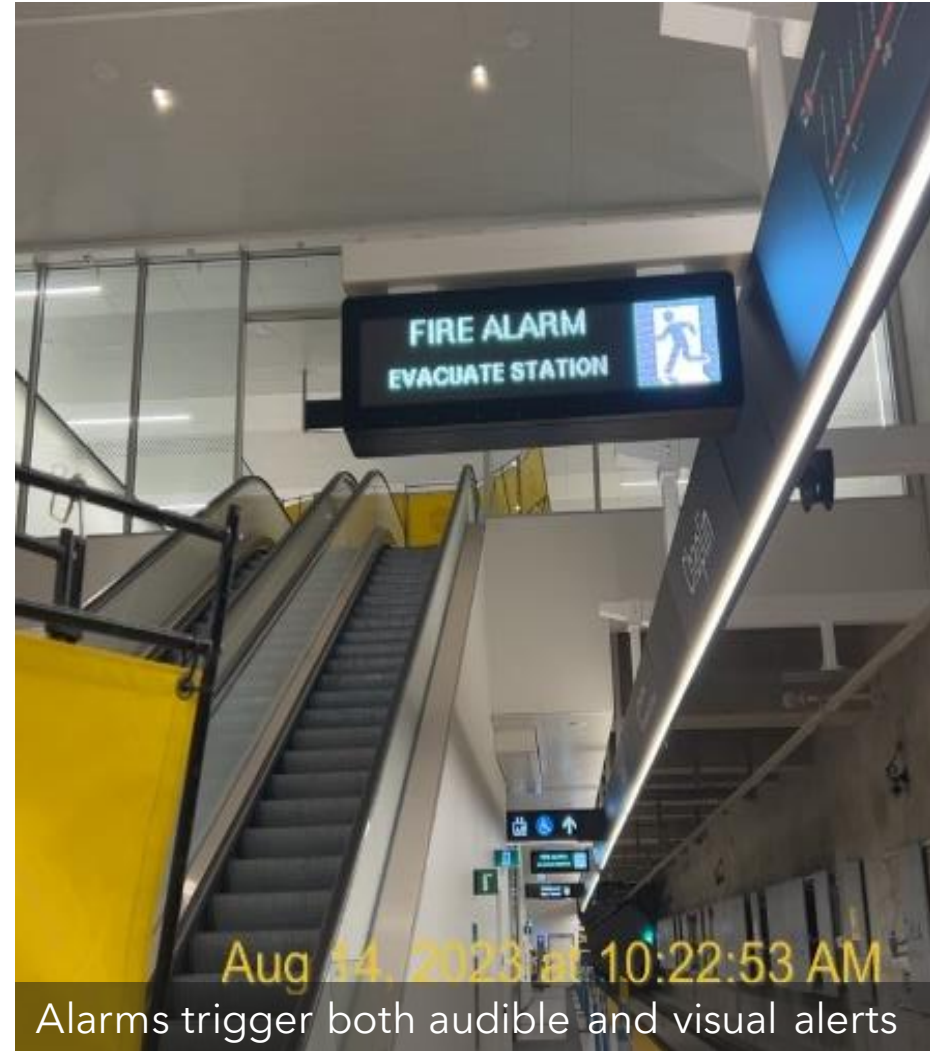
CERTIFYING STATIONS & FACILITIES FOR SAFE OCCUPANCY

- 40 occupancy permits required from City of Toronto, typically one per station, stop or service facility (e.g. emergency exit buildings, power substation buildings). **13** have been received.
 - These certify spaces are safe for occupancy, with relevant life safety systems (e.g. fire alarms, tunnel fire ventilation) in place and working acceptably
 - Some spaces, such as Eglinton station, have particularly complex safety requirements that require multiple fire alarm systems work seamlessly with one another and with related systems, such as faregates
- As a progressive first step CTS has engaged with the City to establish an interim step of “Pre-Revenue Service Occupancy” (PRSO) status. **All 27** PRSOs have been received.
 - While this PRSO does not yet permit broad public access at this time, it does record and acknowledge these locations have stand-alone functioning systems, such as fire alarms, ventilation etc. to acceptable standards.
- The CTS team continue with various testing and commissioning that then allows final dialogue with the City to secure the final occupancy certificates.

CERTIFYING STATIONS & FACILITIES FOR SAFE OCCUPANCY



Fire Alarm Panel



Alarms trigger both audible and visual alerts

CERTIFYING STATIONS & FACILITIES FOR SAFE OCCUPANCY



Axial fan at Kennedy station

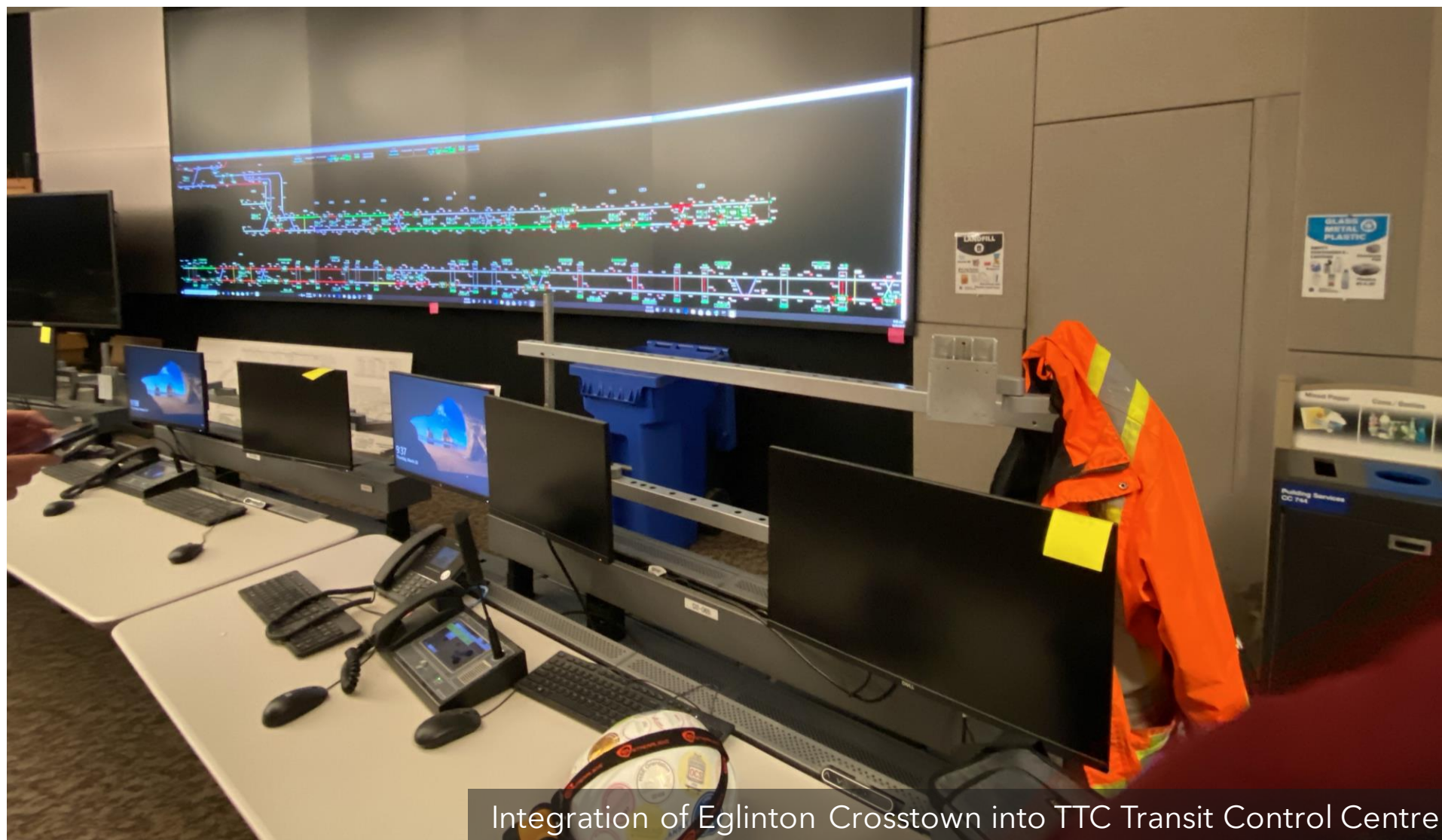
COLLABORATION BETWEEN METROLINX, TTC & CTS



TTC trainers being trained



COLLABORATION BETWEEN METROLINX, TTC & CTS



Integration of Eglinton Crosstown into TTC Transit Control Centre

