



Public Hearing

Audience publique

Commissioner / Commissaire

The Honourable / L'honorable
C. William Hourigan

VOLUME 9

Held at :

Ian Scott Building
100 Thomas More Private
Second Floor Courtroom
Ottawa, Ontario
K1N 1E3

Thursday, June 23, 2022

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100, Thomas More Private
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Charles Powell	
Lena Wang	
Jacob McClelland	
Sarit Batner	Ontario Infrastructure and Lands Corporation (IO)
Julie Parla	
Morgan Watkins	
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III Appearances / Comparutions

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Heather MacKay
Jeffrey Claydon
Adam Mortimer

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Jesse Wright
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+

OLRTC (Ottawa Light Rail Transit Group General Partnership)

+

RTM (Rideau Transit Maintenance General Partnership)

Michael O'Brien
James Doris

STV

IV
Table of Content / Table des matières

	PAGE
MR. RICHARD HOLDER, Sworn	1
Examination in-Chief by Ms. Kate McGrann	1
Cross-Examination by Ms. Kartiga Thavaraj	69
Cross-Examination by Mr. Michael Valo	74
Cross-Examination by Mr. Michael O'Brien	101
Cross-Examination by Mr. John McLuckie	102
Cross-Examination by Mr. David Jeanes	109
Cross-Examination by Mr. Jesse Gardner	111

V
Exhibit List / Liste des pièces

No	DESCRIPTION	PAGE
120	RTG00010893 – Independent Certifier’s Report on Substantial Completion 13 May 2019	26
121	RTG00332042.0001 – Independent Certifier’s Report on Substantial Completion 27 July 2019	37
122	OTT03177178 – OLRT Project Trial Running Test Procedure 31 August 2019	55
123	COW0270758 – Letter from Altus to City of Ottawa and RTG 23 August 2019	58
124	PAR0003446 – O-Train SCADA Alarm Strategy Plan 10 September 2019	79
125	RTG00011288 – Letter RTG and OLRTC to Rideau Transit Maintenance 9 November 2021	83
126	ALS0012324 – Asset Management Plan Alstom Ottawa LRT Maintenance 15 February 2019	86
127	ALS0056183 – Letter Alstom to RTG 1 November 2018	89
128	COW0003617 – OLRT Project Testing & Commissioning Plan 4 December 2015	91
129	COW0000114 – O-Train Confederation Line Project Update 2 April 2019	95
130	COW0000116 - O-Train Confederation Line Project Update 4 June 2019	98
131	COW0536897 – Rheinland Rail Safety Consulting Safety Audit Report of the Ottawa Stage 1 LRT System 13 September 2019	116
132	ALS0012333 – OLRTC OLRT Reliability, Availability and Maintainability Report 23 May 2019	125
133	COW0000281 – OLRT Project Agreement Schedule 1 Definitions and Interpretation 7 November 2019	127
134	COW0159023 – Letter RTG to City of Ottawa 26 August 2019	127
135	COW0159308 – Letter RTG to City of Ottawa 30 August 2019	128

Ottawa, Ontario

1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
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--- Upon commencing on Thursday, June 23, 2022, at 8:58 a.m.

THE REGISTRAR: The hearing is now resumed. Mr. Justice Hourigan is presiding.

COMMISSIONER HOURIGAN: Good morning. Welcome to Day 9 of the hearings. Today, we have one witness only, Richard Holder of the City of Ottawa. Mr. Holder, are you there?

MR. RICHARD HOLDER: Good morning. I'm here. I'm present.

COMMISSIONER HOURIGAN: Okay. I just don't see you, so just standby for a moment. There you are. I see you fine. Mr. Holder, you're going to be examined by a number of counsel today. You have a choice to swear to tell the truth or to affirm to tell the truth. What is your choice?

MR. RICHARD HOLDER: I swear to tell the truth.

COMMISSIONER HOURIGAN: All right. Standby.

--- MR. RICHARD HOLDER: Sworn

THE REGISTRAR: The witness has been sworn in.

COMMISSIONER HOURIGAN: All right. Thank you. You'll first be examined by Commission counsel, Kate McGrann.

--- EXAMINATION IN CHIEF BY MS KATE McGRANN:

MS. KATE McGRANN: Good morning, Mr. Holder.

MR. RICHARD HOLDER: Good morning, Ms. McGrann.

MS. KATE McGRANN: To begin today, would you please provide the Commission with a brief explanation of your education and professional background as it related to your work on Stage 1 of Ottawa's Light Rail Transit System?

MR. RICHARD HOLDER: I am a professional engineer, licenced in the Province of Ontario. I have a Bachelor of Honours degree in civil engineering gained at Sheffield University in the U.K. I have approximately 30 years in the civil engineering industry, working both for agencies and clients, working for contractors, and

1 working for consultants. I have had experience with design build projects in the U.K.,
2 and of most relevance to the LRT project, I have worked for the City of Ottawa since
3 2003, working on progressively larger and more complex city delivery projects.

4 In 2010, I was acting manager that was responsible within
5 infrastructure services department for the delivery of the federal stimulus-funded
6 program, which was -- had a value of over \$250 million. And in 2012, the latter part of
7 2012, I joined the Rail Implementation Office, initially to work on utilities, but as the
8 program moved from the procurement phase and moved into the delivery phase, there
9 was a restructuring of the Rail Implementation Office and I was asked to cover the
10 delivery of the Trillium Line Expansion Project, the 417 Widening Project and a program
11 that was called the Civic Works, which was six to seven city-related municipal type
12 projects that were in the vicinity of the light rail corridor and were therefore bundled into
13 the program.

14 So from the end of 2012 until revenue service availability in -- at the
15 end of 2019, I was working for the delivery office of the Stage 1 Project, and since the
16 end of 2019, I've been working at manager of Light Rail Systems with Stage 2 Rail
17 Construction Program.

18 **MS. KATE McGRANN:** Okay. And specifically with respect to the
19 work that you did on Stage 1, I understand in -- as of 2012, you were working on, I'll call
20 them matters related to Stage 1. It's my understanding that in or about February or
21 March of 2013, you became a Manager of Light Rail Projects; is that correct?

22 **MR. RICHARD HOLDER:** That's correct.

23 **MS. KATE McGRANN:** And in or about the spring of 2015,
24 following another restructuring within the Rail Implementation Office, you took on
25 responsibility for a variety of matters directly related to Stage 1, including managing the
26 vehicle supply, is that right?

27 **MR. RICHARD HOLDER:** That's correct. Would you like me to go
28 through the list?

1 **MS. KATE McGRANN:** I was going to do it, but I would prefer that
2 you do it, yes, thank you.

3 **MR. RICHARD HOLDER:** So as part of my portfolio as Manager of
4 Light Rail Systems and Operational Integration, it included, as you said, the vehicles,
5 the systems; so the multiple systems that are involved in the delivery of a light rail
6 system, the main one being the CBTC Train Control System being provided by Thales,
7 and then at least a dozen other communication systems that provide safety and security
8 within the system. I was also responsible for the safety and security aspect of the -- of
9 the delivery of the project, and operational and maintenance matters.

10 **MS. KATE McGRANN:** Okay. And I believe that as part of your
11 work on safety and security, that included oversight of the independent safety auditor's
12 work?

13 **MR. RICHARD HOLDER:** That's correct.

14 **MS. KATE McGRANN:** And as part of your operational
15 responsibilities, you had responsibility for facilitating the training of operators,
16 controllers, and emergency responders?

17 **MR. RICHARD HOLDER:** That's right. I had oversight and it was
18 a facilitation role to ensure that RTG, Project Co., met their project obligations, the
19 project agreement obligations for their role in training.

20 **MS. KATE McGRANN:** Okay. And as part of the work you were
21 doing, you oversaw the testing and commissioning of the system on behalf of the City?

22 **MR. RICHARD HOLDER:** Correct.

23 **MS. KATE McGRANN:** And you also oversaw trial running, which
24 you'll speak more about later?

25 **MR. RICHARD HOLDER:** Correct.

26 **MS. KATE McGRANN:** And in terms of the maintenance
27 readiness work, I understand that you were providing oversight on behalf of the City, as
28 far as RTM's maintenance readiness went, is that right?

1 **MR. RICHARD HOLDER:** That's correct.

2 **MS. KATE McGRANN:** Am I correct that that maintenance
3 readiness oversight work was done primarily by Parsons?

4 **MR. RICHARD HOLDER:** Primarily, correct.

5 **MS. KATE McGRANN:** Okay. And who was working with Parsons
6 on that piece?

7 **MR. RICHARD HOLDER:** So Tom Fodor was considered the lead
8 within the Parsons assignment for maintenance matters. We had Jonathan Hulse and
9 Mike Palmer, who was -- who were also involved in the Parsons team who were -- had
10 different responsibilities, but they did offer their opinions on maintenance as well, but
11 that was not their key role.

12 **MS. KATE McGRANN:** Okay. And the City considered Mr. Fodor
13 a subject matter expert, as far as maintenance and maintenance readiness went?

14 **MR. RICHARD HOLDER:** That's right, based on his experience. It
15 was our understanding that he had experience of being involved in the maintenance of
16 light rail systems in several jurisdictions.

17 **MS. KATE McGRANN:** Okay. And the City's view that Mr. Fodor
18 was a subject matter expert as far as maintenance went, was -- that remained the City's
19 view throughout his work for the City?

20 **MR. RICHARD HOLDER:** That's right.

21 **MS. KATE McGRANN:** Just to give you a sense of what I'm
22 hoping to focus on with you today, we're going to focus on two key milestones in the
23 project that your work touched on. So substantial completion, first of all, and then -- and
24 then revenue service availability, second of all, and we'll cover them in that order. But
25 both of those were milestones that were set out in the project agreement?

26 **MR. RICHARD HOLDER:** Correct.

27 **MS. KATE McGRANN:** And at a high level -- I'm not going to pull
28 the project agreement out with you, partially because we only have limited time today,

1 but is it accurate to say at a high level that RTG would achieve substantial completion
2 when it could demonstrate that all of the elements of the system were substantially
3 complete?

4 **MR. RICHARD HOLDER:** That is correct. The -- whilst I
5 appreciate you don't want to delve directly into the project agreement, there were --
6 there were seven key requirements that were required for revenue service availability,
7 and in terms of substantial completion, the two key items were substantial completion of
8 the fixed assets of the vehicles and also the demonstration that testing and
9 commissioning had been performed in accordance with the project agreement
10 requirements.

11 **MS. KATE McGRANN:** Okay. And the -- as far as the testing and
12 commissioning went, what was the purpose of the entire -- of the entire testing and
13 commissioning exercise? Like, what was it done to do?

14 **MR. RICHARD HOLDER:** Well, what's different about a light rail
15 system, transit system as compared to a typical civil project is there are multiple
16 systems that work in collaboration with each other to ensure the safety and security of
17 operators, of maintainers, but most importantly, of passengers. So on a typical civil
18 engineering project that involves the provision of materials, asphalt, concrete, the
19 structures, then substantial completion is attained when the -- when the agency has
20 preferential use of that facility as -- and it's quite easy to demonstrate that through the
21 inspection of the assets that have been provided.

22 With a transit system, because we have -- it's a -- it's more of a
23 system integration project than it is a civil project. The civil components of the light rail
24 system are considered to be relatively straightforward. It's the integration of the system
25 elements that is sophisticated.

26 So the purpose of the testing and commissioning is to undertake
27 various levels of testing of those systems, and it occurs in a -- as a series of levels with
28 each level getting more and more complex. So the basic -- and the first part of the

1 testing would occur with the supplier at their -- at their factory. First article inspection of
2 the piece of equipment that they have -- that they have created to meet the
3 specifications that they've been provided, and then we go through a number of different
4 levels of testing that ultimately end up with a system integration test that would test that
5 particular unit functioning in a facility in combination with several other components or
6 pieces of equipment or systems.

7 **MS. KATE McGRANN:** Okay. And I take it that the system
8 integration test -- they're really looking at whether that system is coexisting and
9 interacting with other integrated systems in the way that it should be. Is that right?

10 **MR. RICHARD HOLDER:** That's correct.

11 **MS. KATE McGRANN:** Okay. Thank you for that overview of
12 testing and commissioning, that's very helpful; I can cross a couple of questions off my
13 list as a --

14 **MR. RICHARD HOLDER:** Thank you.

15 **MS. KATE McGRANN:** -- result. And we're going to talk more
16 about testing and commissioning in just a second, but turning back to the -- the sort of
17 high-level overview of the two key milestones -- and please do provide detail or correct
18 me wherever what I'm saying to you doesn't match up with your understanding.

19 In terms of -- in terms of substantial completion, I understand that
20 according to the project agreement, in order for any deficiencies to remain or to be
21 allowed at the time of substantial completion, the only deficiencies that were allowed by
22 the project agreement are minor deficiencies. Is that right?

23 **MR. RICHARD HOLDER:** When it comes to deficiencies, the
24 project agreement only talks about minor deficiencies. There is a definition. There is no
25 definition for major deficiencies. So there -- that's not discussed. So the understanding
26 of achievement of substantial completion is that the City has use and enjoyment of the
27 facility; ---

28 **MS. KATE McGRANN:** Okay.

1 **MR. RICHARD HOLDER:** --- in this case, the light rail system.

2 **MS. KATE McGRANN:** And that's one of four criteria to determine
3 whether a deficiency meet the require -- or the definition of a minor deficiency, right?

4 **MR. RICHARD HOLDER:** Correct.

5 **MS. KATE McGRANN:** Okay. And so turning back to my
6 question, the project agreement contemplates that following substantial completion
7 there will be minor deficiencies as comply with that definition, right?

8 **MR. RICHARD HOLDER:** That's correct.

9 **MS. KATE McGRANN:** It does not contemplate the existence of
10 any deficiencies that do not fall within the definition of minor deficiencies?

11 **MR. RICHARD HOLDER:** That's correct.

12 **MS. KATE McGRANN:** And then following substantial completion,
13 the next step is trial running?

14 **MR. RICHARD HOLDER:** That is correct.

15 **MS. KATE McGRANN:** And what did you understand the purpose
16 of trial running to be?

17 **MR. RICHARD HOLDER:** At the point of substantial completion,
18 the evaluation is very much on the delivery that is being provided by RTG, the main
19 contractor on the project; have they delivered the assets that the City were expecting,
20 and that the City was going to pay for?

21 When it came to trial running there was -- it was -- the purpose of
22 trial running is to ensure that at the railway level that the systems that had been tested
23 by RTG and confirmed to be functional could be used effectively and efficiently by the
24 City's operations team. So the nature of this contract, this design, build, finance,
25 maintain contract was that the City maintains the operations performance piece of the
26 light rail system. So trial running brought together the assets, all the -- all the systems
27 and all the assets that had been built with the operators and controllers provided by OC
28 Transpo to demonstrate that the system as a whole at the railway level could provide

1 passenger service as would be expected once we moved into passenger service. So
2 the trial ---

3 **MS. KATE McGRANN:** And I think ---

4 **MR. RICHARD HOLDER:** --- the trial -- sorry. So the trial running
5 was the very -- the very final step of the process prior to moving into passenger service.

6 **MS. KATE McGRANN:** Okay. And when you think about the
7 groups involved in delivering passenger service; so you've got RTG delivering the
8 system and all the assets, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And the City is operating the system?

11 **MR. RICHARD HOLDER:** Correct.

12 **MS. KATE McGRANN:** And it's doing that in collaboration with
13 RTM, who is maintaining the system in real time, right?

14 **MR. RICHARD HOLDER:** That's correct.

15 **MS. KATE McGRANN:** So really in terms of successful completion
16 of trial running, you need the City and RTM to be working together to make the system
17 do what it is -- what is required to do, to the extent that it's able to do that?

18 **MR. RICHARD HOLDER:** That's correct. RTM is fundamentally
19 the same entity as RTG. So RTG, as part of their responsibility of demonstrating to the
20 City that they had achieved substantial completion, included the demonstration that they
21 had met the maintenance and rehabilitation requirements of the project agreement.

22 **MS. KATE McGRANN:** Okay.

23 **MR. RICHARD HOLDER:** And RTG, the entity that the City has a
24 contract with, declared that all those requirements had been met at substantial
25 completion.

26 **MS. KATE McGRANN:** Okay. And we'll come back to what the --
27 what achieving substantial completion on this project looked like in a few minutes, but
28 just to make sure that I've got your answer on this, the purpose of trial running is to

1 demonstrate that the system can perform in the way that it is intended to perform in the
2 project agreement for passenger service?

3 **MR. RICHARD HOLDER:** Right.

4 **MS. KATE McGRANN:** And then following successful completion
5 of trial running, you had identified that there were -- there were seven elements to
6 achieve revenue service availability, successful completion of trial running being one of
7 those?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And then it is also a requirement that an
10 independent safety auditor certify the safety of the system?

11 **MR. RICHARD HOLDER:** That's correct.

12 **MS. KATE McGRANN:** And then another five requirements, which
13 we don't need to dig into at this point in time.

14 The next thing I want to speak with you about is testing and
15 commissioning, which you oversaw on behalf of the City, right?

16 **MR. RICHARD HOLDER:** Correct.

17 **MS. KATE McGRANN:** And you've already described this but
18 testing and commissioning needs to effectively be complete in order to achieve
19 substantial completion?

20 **MR. RICHARD HOLDER:** Correct.

21 **MS. KATE McGRANN:** And as I understand it, RTG drafted the
22 testing and commissioning plan?

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KATE McGRANN:** And the City had the opportunity to review
25 and comment on those plans?

26 **MR. RICHARD HOLDER:** They did.

27 **MS. KATE McGRANN:** And the City also had the opportunity to
28 oversee all of the testing undertaken?

1 **MR. RICHARD HOLDER:** Correct.

2 **MS. KATE McGRANN:** And in practice on this project, the City did
3 not witness all of the tests that were performed?

4 **MR. RICHARD HOLDER:** Correct.

5 **MS. KATE McGRANN:** You explained that the City took a risk-
6 based approach to determine which of the tests it was going to witness?

7 **MR. RICHARD HOLDER:** That's correct.

8 **MS. KATE McGRANN:** And I take it that means that the City
9 looked at the various tests and the levels at which they were taking place and what they
10 intended to achieve, and it identified the most important tests for it to witness?

11 **MR. RICHARD HOLDER:** That's right. We undertook an exercise
12 of taking the list of SAT tests and SIT tests, and then breaking that down and using a
13 sliding scale picking the top -- what we considered to be the high-priority tests
14 associated with each of the systems. So it was not a case that we just picked, you
15 know, five of the systems and we didn't do any testing on the other five. We had a
16 representative sample from all of the tests -- sorry; from all of the systems.

17 And then in terms of the attendance at the tests the -- we were
18 involved in all the systems acceptance tests, so I believe there are -- there were in the
19 order of 250 to 300 system acceptance tests, and we made the effort, we made the
20 commitment to attend all those SAT tests.

21 For the SIT tests of which there were a few thousand we did not
22 attend all of them. I don't know the percentage that we did attend but it was -- it was a
23 higher level of attendance than the next level of tests, which would have been the PICO
24 tests. So we did not make a huge effort to attend the PICO tests that were occurring
25 within the stations because then we're getting into the order of tens of thousands of
26 tests that were taking place.

27 **MS. KATE McGRANN:** Okay. And you -- just to help situate those
28 of us who aren't as familiar with the testing processes, you are -- you had previously

1 described that there's a series of levels of tests that I would say they're testing
2 increasing levels of complexity of the components of the system, is that fair?

3 **MR. RICHARD HOLDER:** That's correct.

4 **MS. KATE McGRANN:** And in terms of lowest complexity to
5 highest complexity PICO is lower than SAT tests?

6 **MR. RICHARD HOLDER:** Correct.

7 **MS. KATE McGRANN:** And SAT tests are lower than SIT tests?

8 **MR. RICHARD HOLDER:** That's correct.

9 **MS. KATE McGRANN:** Okay. And you had mentioned SAT tests
10 a couple of times. Those are System Acceptance Tests?

11 **MR. RICHARD HOLDER:** That's correct.

12 **MS. KATE McGRANN:** Okay. And in terms of the purpose of a
13 Systems Acceptance Test, am I right that that is intended to test the standalone function
14 of a system?

15 **MR. RICHARD HOLDER:** That would be a SAT test.

16 **MS. KATE McGRANN:** Okay.

17 **MR. RICHARD HOLDER:** So if we want to use an example of the
18 CCTV system that is providing safety and security on the system. So we have over, I
19 think, 1,300 cameras on the Confederation Line Project. All those camera views are
20 available for viewing at the TOCC, so that the controllers in the TOCC can monitor the
21 status of activities of platforms and throughout the system.

22 So it -- looking at the process of testing and commissioning of the
23 CCTV system, we would start at a device level of an individual camera being installed
24 and mounted and being tested back to the server at the communications room within
25 the station to make sure that there is a signal between the CCTV camera and the
26 server. So that would be -- that would be a PICO, Post-Installation Check Out.

27 So that's just the camera, but then in terms of a SAT, Systems
28 Acceptance Test, then we'd be looking at a test that would cover the complete CCTV

1 system. So then we would be checking from the Transit Operations Control Centre and
2 making sure that we can view all the cameras and that all the camera views are clear on
3 the TOCC. So that would be a SAT for a CCTV camera on its own.

4 But in addition to that there would be a number of system
5 integration tests associated with the CCTV system. So for instance, the intrusion with
6 the CCTV system.

7 So for instance, the intrusion access control system, which is what
8 people would recognize as the card readers adjacent to doors to prevent intruders from
9 entering secure rooms. The IAC card readers were also linked to the CCTV system.
10 So if somebody -- if an intruder tried to flash a card that was not authorized, then at the
11 TOCC, the image of that card reader next to that door would pop up at the -- at the
12 Special Constables Unit's video screen, and would indicate who that person who was
13 trying to gain access. So that would -- that would be an example of a -- of one SIT of
14 the CCTV.

15 There were -- there -- so the CCTV was also integrated into other
16 systems. We had the CCTV system was integrated into the -- how the vehicle
17 operated; and we'll probably get to that issue later on as one of the key issues that was
18 not ready at substantial completion. But one of the key hazards on a light rail system is
19 that the hazard associated with a passenger becoming caught by a closing door just
20 prior to the train leaving.

21 So there are a number of safety features associated with the door
22 mechanism itself. We have monitoring of the closing pressure; we have sensitive
23 edges; we have a number of measures on the door itself. But in addition to that, to try
24 and prevent or to mitigate this hazard of somebody being trapped, we have CCTV
25 cameras that are mounted on the platform that give images to the operator in his cab of
26 that platform edge where the doors are.

27 So prior to the train leaving a platform, the operator is able to see
28 that there is nobody who is close to those doors so that there is nobody that is trapped

1 by those doors. So that was a key mitigation for that hazard. And so that -- that's
2 another example of that it was necessary to have a System Integration Test to ensure
3 that that system between the -- between the vehicle cab and the CCTV system that that
4 was functioning properly.

5 **MS. KATE McGRANN:** Okay. And that helps explain why there
6 are -- you said there were hundreds of System Acceptance Tests, and that makes
7 sense because there are hundreds of components within the light rail system, right?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And then there are thousands of System
10 Integration Tests because, as between those hundreds of components, there are many
11 more relationships that need to be reviewed in order to ensure that the system is
12 working together as it's intended to, is that right?

13 **MR. RICHARD HOLDER:** Maybe I haven't explained enough, but
14 it's the reverse, in fact. So we have fewer System Integration Tests. That's the highest-
15 level test. We have many more System Acceptance Tests.

16 **MS. KATE McGRANN:** Okay. So it's the case that there are
17 thousands of System Acceptance Tests and about 250 to 300 System Integration
18 Tests?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** Okay. And your team is reviewing the
21 results of the testing on behalf of the City, right?

22 **MR. RICHARD HOLDER:** That's correct. So we had a team of
23 City staff, plus we had a number of consultants who were working for us during that
24 period.

25 **MS. KATE McGRANN:** And is it the case that the City is viewing
26 certain tests that has -- it has determined or it's important to view, but it's actually
27 reviewing the results of more tests than those that it had attended?

28 **MR. RICHARD HOLDER:** That's correct.

1 **MS. KATE McGRANN:** Okay. And ---

2 **MR. RICHARD HOLDER:** From a -- if I may expand? Just from a
3 logistical perspective, there were -- there were many tests that were taking place every
4 day. We had 13 stations, so many tests were being repeated from station to station to
5 station. Plus, we had many tests being undertaken in the guideway.

6 So to provide coverage was challenging for the City, with the
7 resources that we felt were necessary. And we -- as I mentioned, we had a risk-based
8 approach to which tests we actually attended. But from the perspective of reviewing the
9 documentation, then it was -- it was our team's commitment to ensure that we reviewed
10 all the System Acceptance Test reports and as many of the SAT tests reports as we
11 could as well.

12 **MS. KATE McGRANN:** And for the reports that the City reviewed,
13 I take it that the tests were not considered passed until the City agreed that the tests
14 were passed?

15 **MR. RICHARD HOLDER:** That's right. We would -- we would
16 challenge. There were many test reports that were provided where we would challenge
17 that that test had actually passed. And in several instances, the test was repeated.

18 **MS. KATE McGRANN:** Okay. And I'm going to walk through with
19 you or ask you to walk me through the possible outcomes of a test in a few minutes, but
20 before we get there, I just want to talk about what the reality of testing and
21 commissioning on this project looked like. And am I right that as a result of a variety of
22 factors, the period that was originally planned for the testing and commissioning ends
23 up being shortened significantly, and the testing that's planned is compressed as
24 compared to what was originally envisioned?

25 **MR. RICHARD HOLDER:** There -- that is an important point to
26 make, that the period itself of testing commissioning was reduced. But another
27 important departure from the original plan was just the program of testing and
28 commissioning. So at the beginning of the contract, RTG had a program whereby they

1 would -- they would start in the east and work through several zones to the west, and
2 progressively increase the maturity of the testing and commissioning as they moved
3 west.

4 Their intent was to do as much testing in a -- in the east end as
5 possible so that any issues with the PICO's, with the SATs, with the SITs could be fixed,
6 could be resolved in that first test area in the east. And then once they were satisfied
7 that they, you know, had had satisfactory performance from the various systems and
8 had confidence that they were being integrated, that's when they would move to the
9 next section.

10 So it was -- I believe they had four zones, and it -- the intent was
11 starting from 4, then 3, then 2, then 1. And so that plan was robust in that by the time
12 they get to the west end, the expectation was that all the bugs associated with all the
13 systems would have been ironed out. And the ---

14 **COMMISSIONER HOURIGAN:** Mr. Holder, ---

15 **MR. RICHARD HOLDER:** --- testing ---

16 **COMMISSIONER HOURIGAN:** This is a fairly specific question
17 that was asked of you about the reduction time. You've now gone on for several
18 minutes about other things. I am just going to ask you, as you go through your
19 testimony, please focus on the questions that are asked of you and try to answer those,
20 please.

21 **MS. KATE McGRANN:** And if you don't mind, Mr. Commissioner,
22 this is important information and so -- and so I would like Mr. Holder to complete this
23 answer, but we will both take your direction going forward.

24 **COMMISSIONER HOURIGAN:** Well, let me put it this way, it is
25 more helpful to the listener if the questions or the answers respond to the specific
26 questions that are asked. I know information is coming out. I know Mr. Holder has a lot
27 of information he wants to get out. But it's better for us if we have questions that have
28 answers to them that are responsive to the question.

1 So go ahead, finish your answer.

2 **MS. KATE McGRANN:** And so, Mr. Holder, you had been
3 describing that the original plan was to move sequentially from the east to west, and
4 that the idea was that bugs would be identified and ironed out as the -- as the testing
5 moved through the system, such that once you hit the end, everything should be
6 performing as expected as a result of the organized and sequential approach taken to
7 testing, right?

8 **MR. RICHARD HOLDER:** Yes, that's correct. And I believe that,
9 that's an important component of my answer to the question about the time that was
10 available for testing and commissioning, because that plan was interrupted when we
11 had the sinkhole event. And it was not possible for the contractor to move sequentially
12 from east to west, and they had to jump -- they had to jump over the centre portion of
13 the project and move to the west.

14 **MS. KATE McGRANN:** And in your Commission interview, you
15 described a number of challenges that were encountered in the actual application of the
16 testing and commissioning, but I wonder if you could just describe for us, at a high level,
17 what challenges you saw presented as a result of, one, the change in time available,
18 and, two, the change in approach that RTG had to take to testing and commissioning on
19 this project?

20 **MR. RICHARD HOLDER:** I think the key issues, if I am to be
21 concise with my response, would be associated with the train control system testing and
22 the integration of the vehicle with the train control system.

23 **MS. KATE McGRANN:** And could you expand on ---

24 **MR. RICHARD HOLDER:** So ---

25 **MS. KATE McGRANN:** Sorry. Yeah, please go ahead.

26 **MR. RICHARD HOLDER:** Sorry. So, we had Thales undertaking
27 their own SAT test, their system acceptance test, just for their own system, just verifying
28 that their own system was working correctly. We also had Alstom undertaking their own

1 tests to ensure that the vehicle is meeting all the testing requirements. But they
2 frequently were trying to operate on the same piece of track at the same time.

3 So, the challenge for RTG was to demarcate this area for Alstom
4 testing, this area for Thales testing. And that proved to be challenging because
5 sometimes the area that had been allocated to either of those parties became unusable
6 because of issues that may have occurred with the infrastructure, either with the
7 passive eye and distribution system, or with the switches, or with some other wayside
8 equipment. But the two teams of Alstom and Thales individually had challenges
9 undertaking their own tests, and that was occurring at the same time.

10 Compounding that was the necessity for them to undertake system
11 integration tests to ensure that the CBTC system is correctly communicating with the
12 vehicle -- onboard computer system on the vehicle. And, again, issues with track, with
13 switches, with passive eye, possibly issues with the vehicle, that caused many
14 unsuccessful testing programs, because they just could not complete the work in the
15 time that had been allocated to them. So, that was one of the key challenges that was
16 occurring for the testing and commissioning program. There were other challenges.

17 **MS. KATE McGRANN:** I think that this is consistent with what you
18 said during your Commission interviews. You identified that there was a challenge in
19 that a number of tests were occurring simultaneously.

20 **MR. RICHARD HOLDER:** Correct.

21 **MS. KATE McGRANN:** And you also identified that it was a
22 struggle or a challenge to complete the testing and commissioning in a logical fashion?

23 **MR. RICHARD HOLDER:** That's correct.

24 **MS. KATE McGRANN:** And did that have implications for the
25 identification and resolution of issues that arose during the testing and commissioning?

26 **MR. RICHARD HOLDER:** I believe that the testing and
27 commissioning team, the oversight team from OLRTC, plus the testing and
28 commissioning teams from the individual suppliers had challenges because the level of

1 maturity from one test to another was not really where it should have been. So, ideally,
2 if you complete all your PICO tests with a CCTV system, for instance, and you complete
3 them all 100 per cent accurately, so you know absolutely certainly that a particular
4 camera is reporting back to the server and then reporting up to the TOCC, if you've
5 done that across the whole system, you've insured all your PICOs are working, then the
6 next level, the SAT test, is going to be a lot easier.

7 But if you get to your systems acceptance testing and you start
8 finding faults, then there's a potential that it could be because a PICO was either missed
9 or not completed accurately. So, the level of rework that was necessary was more --
10 was more than could have been necessary, and that was what was being reported to
11 me from people within my team.

12 **MS. KATE McGRANN:** And this sort of non-sequential testing, if I
13 can put it that way, you haven't completed all the PICO tests before you move on to the
14 next level of testing, the SAT test; have I got it so far?

15 **MR. RICHARD HOLDER:** They may have considered that they've
16 completed the PICO tests, but for whatever reason, a test -- a PICO that had been
17 considered a pass was actually not a pass.

18 **MS. KATE McGRANN:** Okay. And that approach that ends up
19 being taken, does that introduce risks that the higher-level tests may not identify issues
20 that would have been identified if the testing and commissioning program had
21 proceeded in the sort of orderly, one step at a time kind of approach that was originally
22 envisioned?

23 **MR. RICHARD HOLDER:** The risk is associated with delays. So,
24 it just takes much longer to complete your SAT test if you're having to go back and
25 repeat certain PICO tests. But in terms of the validity of that SAT test, once you have
26 that SAT test and you're satisfied that the system is functioning properly, then you can
27 only do that if you've resolved all the other issues that were missed prior. So, that's why
28 this sequential process of testing, that's why it's an industry standard for testing and

1 commissioning, because it picks up issues.

2 **MS. KATE McGRANN:** Okay, and that's -- please go ahead.

3 Sorry.

4 **MR. RICHARD HOLDER:** Yes. So, it does pick up issues. You
5 cannot move forward to the next step unless you're satisfied that all the previous steps
6 have been passed.

7 **MS. KATE McGRANN:** Okay. And that's an industry standard that
8 was departed from on this project?

9 **MR. RICHARD HOLDER:** No. No, I wouldn't say that that was an
10 industry practice that was departed. There were challenges. There were many
11 challenges for OLRTC to follow that industry practice, but I don't suggest that they
12 departed from that practice.

13 **MS. KATE McGRANN:** Okay. Well, let me look at it this way. So,
14 the PICO test, the idea is that they are all passed before you move on to the SAT test,
15 right?

16 **MR. RICHARD HOLDER:** Correct.

17 **MS. KATE McGRANN:** And in this case, what you're seeing at the
18 SAT test results is deficiencies that ought to have been identified during the PICO
19 testing.

20 **MR. RICHARD HOLDER:** Correct.

21 **MS. KATE McGRANN:** Deficiencies that ought to have been
22 identified and resolved during the PICO test?

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KATE McGRANN:** And so, then, you've got to take a step
25 back, and those issues are then resolved, and then you retry the SAT test; is that what
26 happens?

27 **MR. RICHARD HOLDER:** That's correct.

28 **MS. KATE McGRANN:** And it sounds like, in this approach, we're

1 relying very heavily on the SAT test to identify all of the issues that ought to have been
2 caught at the PICO test level; is that right?

3 **MR. RICHARD HOLDER:** You are relying heavily on the SAT, but
4 you are not exclusively relying on the SAT. You then go to the next level, which would
5 be the system integration test, and then you have the same process for the system
6 integration test. So, you then start to test the functionality of various systems, and if the
7 combined functionality is not being achieved, then you have to drill -- it was necessary
8 for OLRTC to drill down into, well, what was wrong with our SAT?

9 **MS. KATE McGRANN:** So, I guess my question for you here is,
10 were there any concerns raised by the City or its consultants that the SAT tests may not
11 catch all of the deficiencies that should have been caught at the PICO level, and that by
12 proceeding in this way, latent deficiencies were allowed to remain within the system that
13 wouldn't be caught until later?

14 **MR. RICHARD HOLDER:** There was confidence that if the
15 systems acceptance test was ultimately passed, that we could move on to the next
16 level, but we were not accepting -- so, the City was -- the City had a contract for a
17 system. We weren't buying cameras. We weren't buying card readers. We weren't
18 buying platforms. We were buying the whole system. So, we were satisfied when
19 OLRTC presented SAT results that indicated that individual systems on their own were
20 functioning as intended. That wasn't the end of the story for the City, nor was it for
21 OLRTC. The final level of testing is the system integration test. So, it would be the
22 system integration test that would find any issues for the SATs, for the PICOs, for the
23 factory acceptance tests, for the first article inspections.

24 So, this layered approach ensured that we would ultimately get the
25 system that would be functioning as intended in the design and in the budget
26 agreement.

27 **MS. KATE McGRANN:** And that's fair, but it doesn't answer the
28 question that I asked you. So, let's back up and do this again. So, you said that the

1 original plan that RTG had was robust, it was sequential, and it was intended to
2 methodically work out issues at each level of testing, such that when you hit the last
3 section of testing, everything should be working as expected, right?

4 **MR. RICHARD HOLDER:** That's in relation to the program of
5 working from the east to the west. Correct.

6 **MS. KATE McGRANN:** Okay. And as a result of a number of
7 things, that test is -- that program is departed from?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And then a number of different tests are
10 happening at different levels all at the same time.

11 **MR. RICHARD HOLDER:** Correct.

12 **MS. KATE McGRANN:** And so, my question for you was, the SAT
13 tests that the City received were identifying issues that should have been identified at
14 the PICO level?

15 **MR. RICHARD HOLDER:** In some instances, correct.

16 **MS. KATE McGRANN:** And you've explained that the City was
17 confident, but my question is, did anybody working for the City, either staff or
18 consultants, raise any concerns that the SAT tests might not identify what was missed
19 at the PICO level?

20 **MR. RICHARD HOLDER:** I can't think of specific issues being
21 brought forward. We would have only attended SAT tests when several trial functional
22 tests had taken place by OLRTC. So, we were aware that OLRTC would try and
23 undertake these systems acceptance tests a number of times, find issues, find issues --
24 potentially they were with an individual device, they were related to the connection, the
25 wiring between the device and the server. There could have been a number of issues,
26 but then they would retest themselves, and they would retest, and they would retest.
27 And it was only at the point that they were satisfied that they had found all the
28 discrepancies and all the bugs, it was only then that they would invite the City to attend

1 a systems acceptance test.

2 **MS. KATE McGRANN:** Now --

3 **MR. RICHARD HOLDER:** So, that was ---

4 **MS. KATE McGRANN:** --- let me just -- let me just dig into that
5 answer with you for a second there. Was it the case that the City would only be invited
6 when RTG was satisfied that it had identified all of the issues and the bugs, or was it the
7 case that the City would only be invited when RTG was confident that it could pass that
8 particular test? Because it seems to me that those are two very different things.

9 **MR. RICHARD HOLDER:** I believe that both occurred.

10 **MS. KATE McGRANN:** And what's the basis for that belief?

11 **MR. RICHARD HOLDER:** Because we know that as we
12 approached -- as we moved into 2020 -- I can think of an example around the tunnel
13 ventilation system testing. So, the Rideau station cabin was delayed because of the
14 sinkhole. There is a significant tunnel ventilation system that is incorporated in the
15 downtown tunnel which requires testing across the three stations, as well as testing in
16 the separating tunnels.

17 That whole system was installed quite late in the process. So,
18 when testing began, the OLRTC invited the City to attend those tests, but it was in the
19 absence of them having done their own kind of prior checks. So, we had teams that
20 witnessed tests repeatedly failing until all the bugs were ironed out of the system, but
21 the City was involved in that process for that particular tunnel ventilation system.

22 In terms of -- so, that occurred at the end of the project. If we went
23 back to -- testing and commissioning started in 2018. If we go back to 2018 and we
24 look at some of the less sophisticated systems, there would be a systems acceptance
25 test for a particular station for the CCTV cameras. Then back in 2018, the contractor
26 would have undertaken preliminary SAT tests to make sure everything was working
27 prior to inviting the City to come along to witness SAT tests. So, there was -- in terms of
28 the process, there was not consistency throughout the project.

1 **MS. KATE McGRANN:** Well, let me approach it this way.
2 Potentially with some exceptions, but, generally, by the time RTG achieved substantial
3 completion, all of the tests have been passed and approved by the City, right?

4 **MR. RICHARD HOLDER:** Not all of the tests. There were a
5 number of tests that were listed in the term sheet that were left for revenue service
6 availability.

7 **MS. KATE McGRANN:** And just so that we all know, we're talking
8 about -- this is an agreement that's made that allows RTG to achieve substantial
9 completion without meeting all the requirements of substantial completion as set out in
10 the project agreement, right?

11 **MR. RICHARD HOLDER:** It allowed for some of the systems that
12 we were able to find workarounds for, so that the City would enjoy the functioning in
13 terms of a safety function. We had that ability at substantial completion, but the way the
14 system was functioning was different to the way that it was designed. So, the example
15 that I would bring forward is with the CCTV camera views of the platform edge doors.
16 So, the contractor was struggling to complete that integration test, and as a workaround,
17 the contractor proposed to provide spotters on the platforms that would watch every
18 door closure prior to every vehicle departure to ensure that somebody was not trapped
19 by a door.

20 So, that was a case where there was a system that was designed,
21 this integrated platform edge camera system, but it was not functioning as intended.
22 But in terms of the hazard that was being mitigated, which is somebody being trapped,
23 there was an alternative proposal from the contractor that was accepted by the City and
24 the chief safety officer that was an acceptable mitigation for that particular hazard.

25 **MS. KATE McGRANN:** Okay. Let me see if I can fast forward
26 through this with you. The system continued to display issues that affected its reliability
27 following substantial completion; is that right?

28 **MR. RICHARD HOLDER:** That's correct.

1 **MS. KATE McGRANN:** And the system continued to display
2 issues that affected its reliability after revenue service availability; is that right?

3 **MR. RICHARD HOLDER:** That's correct.

4 **MS. KATE McGRANN:** In fact, the reason that we are here today
5 is because the system failed to perform reliably for a significant period of time following
6 revenue service availability, right?

7 **MR. RICHARD HOLDER:** That's correct.

8 **MS. KATE McGRANN:** We have been called here today to
9 investigate the commercial and technical circumstances that led to the breakdowns on
10 the system once it was launched for public service. That's why we're here.

11 **MR. RICHARD HOLDER:** Correct.

12 **MS. KATE McGRANN:** So, will you agree with me that the SAT
13 test and the SIT test accepted by the City, the City agreed that the system could go to
14 public service, did not catch all the issues and bugs that were present in the system?

15 **MR. RICHARD HOLDER:** I don't know that for a fact.

16 **MS. KATE McGRANN:** Okay.

17 **MR. RICHARD HOLDER:** We know that certain issues with pieces
18 of equipment and components became apparent after revenue service, or they became
19 apparent after substantial completion. So, it is -- it was understood that at the beginning
20 of service, as the systems became loaded and became tested, that there would be
21 some issues with either software or with hardware. Despite the fact that they had
22 completed a full round of testing, certain components would potentially fail. And so, that
23 was what we experienced with the vehicle, and we also experience failures in
24 functioning of some of the track infrastructure as well.

25 **MS. KATE McGRANN:** In terms of any given test, I believe that
26 there's three possible outcomes, right? The test can be passed with no deficiencies; is
27 that right?

28 **MR. RICHARD HOLDER:** Correct.

1 **MS. KATE McGRANN:** The test can be passed with minor
2 deficiencies, right?

3 **MR. RICHARD HOLDER:** Correct.

4 **MS. KATE McGRANN:** And the test can have deficiencies that
5 don't qualify as minor, that's not a pass, the test needs to be repeated?

6 **MR. RICHARD HOLDER:** Correct.

7 **MS. KATE McGRANN:** In terms of minor deficiencies for the
8 testing, are we dealing with the same definition of minor deficiencies as we see applied
9 to the question of whether substantial completion has been achieved?

10 **MR. RICHARD HOLDER:** Broadly speaking, in terms of does the
11 minor deficiency indicate that there is a failure in the functioning of the system, then that
12 would be the definition that I would bring forward. It's slightly different to the definition of
13 substantial completion, but it's similar.

14 **MS. KATE McGRANN:** Okay. And it's the case here that the City
15 did allow the passing of tests with minor deficiencies from time to time?

16 **MR. RICHARD HOLDER:** That's correct. So for instance if there
17 was a Systems Acceptance Test on a CCTV system for a station, and a station
18 potentially having 120 cameras, if there was one camera view that was not coming up
19 then we would -- we would take that that the system as a whole was functioning, but
20 there was a deficiency; one camera needed to be -- needed to be checked. Was it the
21 camera; was it the cabling? But as a system the system test demonstrated that the
22 station CCTV system was functioning.

23 **MS. KATE McGRANN:** I'm going to turn now to look at the process
24 through which RTG achieved substantial completion on this project, and in order to help
25 ground our discussion here I think it is useful to look at the definition of a minor
26 deficiency to help us understand what can be on the minor deficiencies list and what
27 can't.

28 So could we turn up RTG10893? And while that document is being

1 brought up on the screen, sir, the minor deficiencies list, as I understand it, it's involved
2 in the consideration of whether RTG has met the requirements for achieving substantial
3 completion. Is that right?

4 **--- EXHIBIT No. 120:**

5 RTG00010893 – Independent Certifier’s Report on
6 Substantial Completion 13 May 2019

7 **MR. RICHARD HOLDER:** That's correct.

8 **MS. KATE McGRANN:** And we've already talked about the fact
9 that substantial completion is the final milestone before trial running and revenue
10 service availability, right?

11 **MR. RICHARD HOLDER:** Correct.

12 **MS. KATE McGRANN:** And deficiencies within the system are
13 tracked as the project approaches substantial completion, right?

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KATE McGRANN:** And there's an assessment made first by
16 the City as to whether deficiencies qualify as minor deficiencies, right?

17 **MR. RICHARD HOLDER:** That's correct.

18 **MS. KATE McGRANN:** And then the independent certifier looks at
19 RTG submission and it also looks at the City's opinion on whether the deficiencies on
20 the minor deficiencies list properly belong?

21 **MR. RICHARD HOLDER:** Correct.

22 **MS. KATE McGRANN:** And in terms of what qualifies as a minor
23 deficiency if we could go to page 4 of this document -- just to help situate everyone
24 we're looking at the independent certifiers report on substantial completion issued on
25 May 13th, 2019. On page 4 we want to scroll down to the bottom and here in italics we
26 see:

27 “Minor deficiencies means any defects, deficiencies
28 and items of outstanding work, including in relation to

1 seasonal work, arising from or related to the work
2 required to achieve final completion or milestone
3 acceptance in the case of any milestone which would
4 not materially impair [and we see sub (a) here] the
5 public's or the City's use and enjoyment of the
6 system." (As read)

7 And that's the component of minor deficiencies that we've referred
8 to several times this morning already, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And then it goes on to list three other
11 requirements:

12 "Any defects, deficiencies and items of outstanding
13 work can't materially impair the performance of
14 governmental activities..." (As read)

15 And that's defined within the PA.

16 "...the performance of the maintenance services by
17 Project Co.,..." (As read)

18 You see that?

19 **MR. RICHARD HOLDER:** Yes.

20 **MS. KATE McGRANN:** And then:

21 "...the safety or traffic flow on the system in any
22 relevant respect." (As read)

23 Right?

24 **MR. RICHARD HOLDER:** Right.

25 **MS. KATE McGRANN:** And I take it as the City's reviewing the
26 various entries on the deficiency list and looking at whether or not they properly qualify
27 as minor, it's looking at all four of these components of the definition of minor
28 deficiencies to ensure that they are all met, right?

1 **MR. RICHARD HOLDER:** That's right.

2 **MS. KATE McGRANN:** And would you agree with me, sir, that this
3 definition provides very important protection to the City, in terms of what it is ultimately
4 going to be receiving from RTG?

5 **MR. RICHARD HOLDER:** I would agree.

6 **MS. KATE McGRANN:** And so adhering to this aspect of the
7 project agreement is important to the City in order to ensure that it gets what the project
8 agreement promises, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And that's consistent with what we've
11 heard from other witnesses about the City adhering to the project agreement in order to
12 ensure that the City gets what it's promised and what it is paying for, right?

13 **MR. RICHARD HOLDER:** That's correct.

14 **MS. KATE McGRANN:** And -- okay, we can take this document
15 down for the time being.

16 Just to help those of us who aren't as familiar with the progress on
17 this project as you are, in terms of how substantial completion is achieved it basically
18 goes like this, I think, RTG submits for substantial completion; is basically applies?

19 **MR. RICHARD HOLDER:** That's correct.

20 **MS. KATE McGRANN:** And then -- and one element of that
21 submission is the minor deficiencies list but there's more than just that, right?

22 **MR. RICHARD HOLDER:** It is a declaration from RTG that in their
23 opinion they have achieved substantial completion. There is a minor deficiency list but
24 in terms of what RTG provided in their first submission to the City it was -- there was not
25 much material provided with their submission that they had achieved substantial
26 completion.

27 **MS. KATE McGRANN:** And we'll get to that first failed application
28 by RTG in just a minute, but just in order to help people understand the process

1 generally, so RTG applies and then the City then has five days to review and respond
2 to, comment on the City's -- or RTG's application. Is that right?

3 **MR. RICHARD HOLDER:** That is correct.

4 **MS. KATE McGRANN:** And if the City is of the view that the
5 substantial completion requirements have not been met, then they can object to the ---

6 **MR. RICHARD HOLDER:** Correct.

7 **MS. KATE McGRANN:** And they would provide all of the reasons
8 that support that objection, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And all of that information then goes to the
11 independent certifier, right?

12 **MR. RICHARD HOLDER:** Correct.

13 **MS. KATE McGRANN:** The independent certifier reviews RTG's
14 submission and the City's response?

15 **MR. RICHARD HOLDER:** And they undertake a calculation of the
16 value of the minor deficiencies, because that is another component of the evaluation of
17 the achievement of substantial completion.

18 **MS. KATE McGRANN:** And when there isn't agreement between
19 the City and RTG about whether RTG has achieved substantial completion, the IC
20 makes a determination about whether RTG has been successful, right?

21 **MR. RICHARD HOLDER:** They would, yes.

22 **MS. KATE McGRANN:** In terms of whether any particular issue
23 makes it onto the minor deficiencies list, in your Commission interview you said that
24 where the City and RTG agreed that a matter was properly placed on the minor
25 deficiencies list, the independent commissioner generally agreed with that
26 determination?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KATE McGRANN:** You couldn't recall a single example where

1 the IC objected to a deficiency being placed on the minor deficiency list where the City
2 and RTG agreed that it should go there.

3 **MR. RICHARD HOLDER:** I don't recall that occurring.

4 **MS. KATE McGRANN:** And in terms of the items on the minor
5 deficiency list, they are sort of put on hold and they are addressed after revenue service
6 availability is achieved. That's what you said during your Commission interview.

7 **MR. RICHARD HOLDER:** It was anticipated that work would be
8 continuing on addressing the minor deficiencies in the period between the substantial
9 completion notice and revenue service availability, which that period was unknown but
10 there was -- there was, you know, a significant amount of time, so it was not that those
11 deficiencies were put on hold with no work expected, it was very much expected that
12 RTG would continue to work on those deficiencies and it was -- there was a requirement
13 for RTG to address all the minor deficiencies within a certain timeframe after the award
14 of RSA. So it was in their interest to continue to address the minor deficiencies.

15 If I characterized that previously as minor deficiencies were put on
16 hold, then that was an error on my part. I -- my language was not accurate enough.

17 **MS. KATE McGRANN:** Well, I think to be fair to you, sir, your
18 evidence was that the minor deficiencies items are to be addressed after revenue
19 service availability, but I take it you're now saying that it was the City's expectation that
20 RTG would work continually on the minor deficiencies list from the period of time where
21 it applied for substantial completion through trial running and all the way up to revenue
22 service availability. Is that right?

23 **MR. RICHARD HOLDER:** That's right.

24 **MS. KATE McGRANN:** And I take it that items continue -- can
25 continue to be added to the deficiencies list following substantial completion?

26 **MR. RICHARD HOLDER:** Issues can be -- issues become
27 apparent after substantial completion that were -- that were unknown at the time of
28 substantial completion, and they needed to be addressed. In terms of adding them to

1 the contractual list that was provided at substantial completion, then we were -- we were
2 discouraged from adding them to the minor deficiency list.

3 **MS. KATE McGRANN:** Discouraged by whom?

4 **MR. RICHARD HOLDER:** By our contract team. So they needed -
5 - those issues needed to be tracked and they needed to be resolved, but the minor
6 deficiency list was a part of the contractual state at substantial completion.

7 **MS. KATE McGRANN:** Okay, that's interesting.

8 During your Commission interview -- and I am going from notes
9 here, but I believe your evidence was that any deficiencies that were identified after
10 substantial completion were treated as follows: If was a minor deficiency, it went on the
11 minor deficiencies list. If it didn't qualify as a minor deficiency because it impacted
12 system operation, the expectation would be that it would be addressed promptly. But
13 leaving that aside, based on what you're saying, it sounds to me like after substantial
14 completion, we now find ourselves in the position where we've got more than one
15 deficiency list. There's the minor deficiency list as it existed when substantial
16 completion is achieved, right?

17 **MR. RICHARD HOLDER:** That's correct.

18 **MS. KATE McGRANN:** And then there's a separate deficiencies
19 list that includes deficiencies that have been identified following the achievement of
20 substantial completion?

21 **MR. RICHARD HOLDER:** That's right.

22 **MS. KATE McGRANN:** And just to follow this process all the way
23 through to the end, RTG does not achieve final completion until all of the matters on the
24 minor deficiencies list are addressed?

25 **MR. RICHARD HOLDER:** Correct.

26 **MS. KATE McGRANN:** And what about -- what about the matters
27 on the other deficiencies list that's created from the deficiencies that are identified
28 following substantial completion; does RTG have to remedy all of those in order to

1 achieve final completion as well?

2 **MR. RICHARD HOLDER:** They do.

3 **MS. KATE McGRANN:** And RTG has not yet achieved final
4 completion on this project?

5 **MR. RICHARD HOLDER:** No, they haven't.

6 **MS. KATE McGRANN:** And there are still outstanding matters on
7 the minor deficiencies list?

8 **MR. RICHARD HOLDER:** There are.

9 **MS. KATE McGRANN:** And are there still outstanding matters on
10 the post-substantial completion deficiencies list?

11 **MR. RICHARD HOLDER:** There are.

12 **MS. KATE McGRANN:** And are there any other deficiencies lists,
13 other than the minor deficiency list and the post substantial completion deficiency list?

14 **MR. RICHARD HOLDER:** Not that I'm aware of.

15 **MS. KATE McGRANN:** In terms of the City objecting to matters
16 properly being placed on the minor deficiency list, this is something that happened on
17 this project, right?

18 **MR. RICHARD HOLDER:** Did the City objected to items being put
19 on the deficiency list? Yes, we did object.

20 **MS. KATE McGRANN:** And following RTG's first substantial
21 completion submission on April 26, 2019, the City objected to a number of items that
22 RTG said should be on the minor deficiency list, right?

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KATE McGRANN:** Okay. Were you involved in reviewing
25 RTG's submission for substantial completion, at least as far as it pertained to vehicle
26 system, safety, and security?

27 **MR. RICHARD HOLDER:** I was.

28 **MS. KATE McGRANN:** And also as it pertained to operational and

1 maintenance readiness matters, right?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KATE McGRANN:** Okay. We're going to pull up a document
4 that we were looking at earlier, RTG10893.

5 So once again, this is the independent certifier's report on
6 substantial completion issued on May 13th, 2019, and in this report, sir, the independent
7 certifier rejects RTG's submission for substantial completion, right?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And if we could turn to page 5 of this
10 document. If you look at the top, it says:

11 "The following matters are required to performed by
12 Project Co. to satisfy the conditions for the issuance
13 of the substantial completion certificate." (As read)

14 And then it says:

15 "They're included, but not limited to, the matters listed
16 below, and these items cannot be considered minor
17 deficiencies as defined in the project agreement." (As
18 read)

19 Do you see that?

20 **MR. RICHARD HOLDER:** I do.

21 **MS. KATE McGRANN:** And so here the independent certifier sets
22 out a non-exhaustive list of matters that do not properly belong on the minor
23 deficiencies list, right?

24 **MR. RICHARD HOLDER:** That's correct.

25 **MS. KATE McGRANN:** There's a number of items on this list, and
26 time does not permit us to review all of them, so I just want to follow one particular
27 issue, if we can.

28 If we could go to page 5, and we want to look at point number 7.

1 No, I've made a mistake. Can we go to page 7?

2 **MR. RICHARD HOLDER:** Right.

3 **MS. KATE McGRANN:** And we want to look at point number 11.

4 So if we just scroll down a little bit more. And point number 11 says:

5 "Several issues remain outstanding and require
6 resolution to demonstrate vehicle reliability prior to the
7 achievement of substantial completion relating to the
8 vehicle component." (As read)

9 And just pausing here. Sir, I think you'll agree with me that
10 demonstrated vehicle reliability would be very important to the City as it moves towards
11 the completion of RTG's work and the public launch of the system, right?

12 **MR. RICHARD HOLDER:** Correct.

13 **MS. KATE McGRANN:** For its riders, vehicle reliability would be
14 probably the second most important piece. Safety being the only thing that could be
15 more important than vehicle reliability.

16 **MR. RICHARD HOLDER:** Correct.

17 **MS. KATE McGRANN:** Reliable vehicles are what get you to work
18 on time. It's just -- it's key to the system, right?

19 **MR. RICHARD HOLDER:** Absolutely.

20 **MS. KATE McGRANN:** Okay. And so Point number 11 here says:

21 "Several issues remain outstanding and require
22 resolution to demonstrate vehicle reliability." (As
23 read)

24 And then it includes as examples, "Brake defects and failures and
25 door sensitivity issues". So those were outstanding matters at the time that RTG first
26 tries to achieve substantial completion.

27 **MR. RICHARD HOLDER:** That's right.

28 **MS. KATE McGRANN:** And if we go to page 16 of this document,

1 this is the City's opinion on whether or not RTG has achieved substantial completion,
2 right?

3 **MR. RICHARD HOLDER:** It is.

4 **MS. KATE McGRANN:** Okay. And I think you'll agree with me that
5 this letter raises a number of issues that would prohibit RTG from achieving substantial
6 completion?

7 **MR. RICHARD HOLDER:** Yes.

8 **MS. KATE McGRANN:** And again, we just don't have time to
9 cover them all, but if we go to page 19, focusing still on the question of the reliability of
10 the vehicles, this letter says that:

11 "As RTG is aware, the vehicles have been delayed in
12 their delivery for many months and there are major
13 defects, deficiencies, and items of outstanding work."

14 (As read)

15 Do you see that?

16 **MR. RICHARD HOLDER:** I do.

17 **MS. KATE McGRANN:** And that was accurate at the time?

18 **MR. RICHARD HOLDER:** Yes.

19 **MS. KATE McGRANN:** Okay. And then the last sentence of this
20 paragraph says that:

21 "The City requires all vehicles to be ready for use as
22 of substantial completion." (As read)

23 Do you see that?

24 **MR. RICHARD HOLDER:** Yes.

25 **MS. KATE McGRANN:** And that's a requirement of the project
26 agreement, right?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KATE McGRANN:** And that's an accurate description of the

1 City's position at this point in time?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KATE McGRANN:** It wanted all 34 vehicles to be ready for
4 use at substantial completion?

5 **MR. RICHARD HOLDER:** Correct.

6 **MS. KATE McGRANN:** And I take it that ready for use means that
7 the vehicles are good to go save and except for minor deficiencies?

8 **MR. RICHARD HOLDER:** That's right, and that each vehicle would
9 have a safety certificate.

10 **MS. KATE McGRANN:** Okay. And then if we could go over the
11 page to page 20. The first full paragraph here says:

12 "As of April 29th, 2019, there are 25 vehicles that had
13 defects and deficiencies that would prevent the
14 vehicles from being used." (As read)

15 So those are not minor deficiencies?

16 **MR. RICHARD HOLDER:** Correct.

17 **MS. KATE McGRANN:** And it goes on to say that:

18 "The defects and deficiencies are extensive and
19 ongoing and results in a lack of access to the
20 complete fleet." (As read)

21 **MR. RICHARD HOLDER:** Correct.

22 **MS. KATE McGRANN:** And that was accurate at the time?

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KATE McGRANN:** At this point in time, the City had not yet
25 seen 15 double car consists running on the line, right?

26 **MR. RICHARD HOLDER:** I don't believe so.

27 **MS. KATE McGRANN:** Okay. And, and just to help you because
28 this isn't a memory test, sir. The second-last sentence of this paragraph says:

1 "As of April 29th, 2019, the City has observed that
2 there had never been 15 two-car consists running on
3 the track." (As read)

4 Do you see that?

5 **MR. RICHARD HOLDER:** Okay. Yes, I see that.

6 **MS. KATE McGRANN:** And the PA required 15 double car
7 consists running reliability, right?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** Okay. So RTG has not achieved
10 substantial completion at this point in time. Now, I'd like to take you to the independent
11 certifier's report from the second application RTG makes, which is successful.

12 So if we could turn up RTG332042.1, please?

13 This is the independent certifiers report on substantial completion
14 number two, dated July 27th, 2019. If you could just scroll down a little bit to see the
15 date. Okay. You see that there?

16 **--- EXHIBIT No. 121:**

17 RTG00332042.0001 – Independent Certifier's Report on
18 Substantial Completion 27 July 2019

19 **MR. RICHARD HOLDER:** I do.

20 **MS. KATE McGRANN:** Okay. And if we could go to page 3 of this
21 document, and I want to draw your attention to the paragraph -- we'll call it the last full
22 paragraph at the bottom of the page.

23 So we'll need to scroll down and see the bottom of the page.

24 That's great. Thank you.

25 So the paragraph that starts with, "Pursuant to section 26(2) of the
26 project agreement..."; are you with me?

27 **MR. RICHARD HOLDER:** I am.

28 **MS. KATE McGRANN:** Okay. The second sentence says:

1 "The City's opinion is that the conditions for the
2 issuance of the substantial completion certificate have
3 been satisfied with minor deficiencies outstanding."

4 (As read)

5 Do you see that?

6 **MR. RICHARD HOLDER:** I do.

7 **MS. KATE McGRANN:** And then it goes on to say:

8 "The City's opinion is also based on several
9 substantial completion requirements that have been
10 agreed to be deferred or waived and included on the
11 minor deficiencies list." (As read)

12 And then it goes on to describe some aspects of the project
13 agreement.

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KATE McGRANN:** So, at this point in time, the City has
16 agreed to defer some substantial completion requirements, right?

17 **MR. RICHARD HOLDER:** That's correct.

18 **MS. KATE McGRANN:** And it's basically saying, "RTG, you were
19 supposed to do this in order to get substantial completion, but we're saying you don't
20 have to do them now, you can do them later."

21 **MR. RICHARD HOLDER:** If it was the City's opinion that it did not
22 impact the use and enjoyment of the City, then we made that determination to defer.

23 **MS. KATE McGRANN:** So, if it was the City's opinion that it
24 wouldn't impact the use and enjoyment, then that would qualify as a minor deficiency,
25 right?

26 **MR. RICHARD HOLDER:** That's right.

27 **MS. KATE McGRANN:** And then -- and that's permitted at the time
28 of substantial completion?

1 **MR. RICHARD HOLDER:** That's right, but we ---

2 **MS. KATE McGRANN:** What this letter says is that the City has
3 agreed to defer or waive requirements, and I take it that those requirements were not
4 minor deficiencies, sir, they were requirements that couldn't be minor deficiencies;
5 otherwise, the City would have to defer or waive them, right?

6 **MR. RICHARD HOLDER:** I believe that the items that we agreed
7 to defer did not impact the use and enjoyment of the system, but they were considered
8 to be elements of the system that we wanted RTG to address promptly, and we
9 provided a -- we provided a list of the items that were being deferred that were separate
10 to the minor deficiencies list. So, the minor deficiencies list included items such as
11 scratches, small sections of spore concrete, you know, quite a lot of items that would be
12 considered to be minor. The items that were being deferred could be considered to be
13 quite significant, a key one being the number of vehicles that would be available at
14 revenue service availability.

15 **MS. KATE McGRANN:** So, these significant items, I think you'll
16 agree with me, are significant and, therefore, do not belong on the minor deficiencies
17 list?

18 **MR. RICHARD HOLDER:** I would agree that they are -- they fit in a
19 separate group of issues that were outstanding.

20 **MS. KATE McGRANN:** Okay. Well, let me put it to you this way,
21 sir. If the City hadn't agreed to defer or waive these requirements, RTG would not have
22 met substantial completion, right?

23 **MR. RICHARD HOLDER:** That is correct.

24 **MS. KATE McGRANN:** And so, the City is saying to RTG, "You
25 shouldn't really meet substantial completion here on the test in the project agreement,
26 but we'll agree to let you meet some of these requirements later, you can have
27 substantial completion now."

28 **MR. RICHARD HOLDER:** That's basically what the City said, yes,

1 on the basis that it would not impact safety and it would not impact the enjoyment of the
2 system on Day One of revenue service.

3 **MS. KATE McGRANN:** Okay. Well, we'll have to take your word
4 for it, because it doesn't say that in the independent certifier's letter, but I wonder if
5 you'll agree with this, sir. So, by deferring and waiving substantial completion
6 requirements, but allowing RTG to achieve substantial completion anyways, the City is
7 agreeing to depart from the project agreement requirements. This is not what the
8 project agreement envisions.

9 **MR. RICHARD HOLDER:** Well, the project agreement has a
10 definition of substantial completion, that is the full use and enjoyment by the City. The
11 items that we deferred at substantial completion, we wanted to have completed prior to
12 service being available. So, as indicated further down, these items have been
13 categorized as pre-RSA deficiencies, incomplete work that must be completed prior to
14 the issuing of the revenue service availability certificate.

15 **MS. KATE McGRANN:** And I'm going to suggest to you, sir, that
16 this represents a step, but not the last step, that the City takes away from the
17 protections of the project agreement and away from the promised delivery of the system
18 that the project agreement envisions.

19 **MR. RICHARD HOLDER:** If that is your assertion, I'm not sure that
20 I -- I'm not sure that I would agree.

21 **MS. KATE McGRANN:** Let's take a look at page 10 of this
22 document. So, this is a letter -- at the top, you can see it's dated July 22nd, 2019. It's to
23 the City from RTG. Do you see that?

24 **MR. RICHARD HOLDER:** I do.

25 **MS. KATE McGRANN:** And the subject is "Substantial Completion
26 Notice". I want to draw your attention to the third paragraph in the body of the letter
27 where it says,

28 "The attached and, specifically, the substantial

1 completion tracker addresses the items that were
2 deemed to be lacking in our prior submittal, and for the
3 sake of expediency, and as agreed with the City and
4 the independent certifier, RTG has not resubmitted the
5 entire application.”

6 So, this tracker addresses outstanding items, okay?

7 **MR. RICHARD HOLDER:** Okay.

8 **MS. KATE McGRANN:** And now I want to take you to page 12 of
9 this document for some more information about what this tracker is. So, now we're
10 looking at a July 22nd, 2019, letter from OLRTC submitted to RTG, and if we could scroll
11 down a little bit, I want to look at the second sentence in the second paragraph, which
12 says,

13 “In particular, OLRTC has completed all outstanding
14 matters that are not otherwise minor deficiencies as
15 agreed by the City of Ottawa. Please find attached a
16 tracker with the outstanding matters and their closed
17 status as agreed during the meetings with the City.”

18 Do you see that?

19 **MR. RICHARD HOLDER:** I do see it.

20 **MS. KATE McGRANN:** So, I take it that the tracker, which we're
21 going to look at in a second, sets out all matters that were not otherwise minor
22 deficiencies, that's what it says here, right?

23 **MR. RICHARD HOLDER:** Yes, I would like to see the tracker.

24 **MS. KATE McGRANN:** Okay.

25 **MR. RICHARD HOLDER:** So, you will bring it up?

26 **MS. KATE McGRANN:** Let's look at the document and then I'll ask
27 you my next question, and that's entirely fair, sir. Can we go to page 17 of the
28 document? So, this is a document titled, “Substantial Completion Tracker.” And based

1 on what we just read in the letter from RTG and the letter from OLRTC, my
2 understanding is that this tracker lists all outstanding non-minor deficiency items, right?

3 **MR. RICHARD HOLDER:** Correct.

4 **MS. KATE McGRANN:** And the City has agreed that RTG can
5 achieve substantial completion with these items and this status as listed in this tracker.

6 **MR. RICHARD HOLDER:** That is what OLRTC is indicating to
7 RTG. That's correct. I do not know if this tracker list is complete, since this is a
8 document between OLRTC and RTG.

9 **MS. KATE McGRANN:** Well, it's a document that's included in the
10 independent certifier's report on substantial completion, certifying that substantial
11 completion has been met.

12 **MR. RICHARD HOLDER:** Okay.

13 **MS. KATE McGRANN:** So, I would like to look at page 18 of this
14 document, because, again, we don't have time to go through all of the items that are
15 listed on this, but let's look at item number 29. So, item number 29 describes Vehicle
16 LRV 1, and it says, "Confirm availability and open issues." Do you see that?

17 **MR. RICHARD HOLDER:** I do.

18 **MS. KATE McGRANN:** And I can show you over on the next page
19 if you want, but I'm going to tell you that LRVs 1 through 34 are listed in this list, and
20 each one of them -- there you go -- has the same description open item, "Confirm
21 availability and open issues." Do you see that?

22 **MR. RICHARD HOLDER:** I do.

23 **MS. KATE McGRANN:** And the status for each of these 34 items
24 is not closed, right?

25 **MR. RICHARD HOLDER:** As I see that other items are not closed
26 as well, yes.

27 **MS. KATE McGRANN:** That's right, but if you look at number 63,
28 which we can see right here, that status is closed. That matter has been dealt with,

1 right?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KATE McGRANN:** But these 34 vehicle issues are not closed.

4 **MR. RICHARD HOLDER:** That is what that tracker is indicating,
5 yes.

6 **MS. KATE McGRANN:** And the timing listed is pre-SC. Is that
7 pre-substantial completion?

8 **MR. RICHARD HOLDER:** That is what that means, yes.

9 **MS. KATE McGRANN:** But it looks to me, based on the
10 documentation attached to the independent certifier's report that the City has agreed
11 that RTG can achieve substantial completion with all 34 vehicles having an open item of
12 confirm availability and open issues here; is that right?

13 **MR. RICHARD HOLDER:** I believe in the City's determination, we
14 were very specific about the items that could remain open for the vehicles, but needed
15 to be resolved by revenue service availability.

16 **MS. KATE McGRANN:** Okay. And my question is, the City agreed
17 that RTG could achieve substantial completion with all of these issues open, right?

18 **MR. RICHARD HOLDER:** That's correct.

19 **MS. KATE McGRANN:** And then if we go down to item 72, again,
20 we've got a -- this applies to vehicles, and it's system wide. So, that's all the vehicles
21 on the system, right?

22 **MR. RICHARD HOLDER:** Correct.

23 **MS. KATE McGRANN:** And the open issue is failure to meet
24 service standards due to reliability of subsystems.

25 **MR. RICHARD HOLDER:** That's right.

26 **MS. KATE McGRANN:** And this is not a closed item.

27 **MR. RICHARD HOLDER:** No.

28 **MS. KATE McGRANN:** The status is monitor?

1 **MR. RICHARD HOLDER:** Correct.

2 **MS. KATE McGRANN:** The City has agreed that RTG can achieve
3 substantial completion with a system-wide vehicle failure to meet service standards due
4 to reliability of subsystems?

5 **MR. RICHARD HOLDER:** That's right. There was the expectation
6 that the reliability issues that were occurring with the fleet would improve significantly
7 between the period of substantial completion and revenue service. It would not have
8 been possible to complete the trial running period if reliability issues with the vehicles
9 were sufficient that the trial running objectives were not achieved.

10 **MS. KATE McGRANN:** And we'll come to that in a little bit, but for
11 now, there's one more item I want to look at on this list with you, and it's on the next
12 page. It's item 73. And so, again, we're looking at a vehicles issue, and, again, it's
13 system wide. Do you see that?

14 **MR. RICHARD HOLDER:** I do.

15 **MS. KATE McGRANN:** And the open item here is a failure to meet
16 fleet requirements due to ongoing defects/deficiencies. Do you see that?

17 **MR. RICHARD HOLDER:** I do.

18 **MS. KATE McGRANN:** And this is an item that's not closed?

19 **MR. RICHARD HOLDER:** I see that.

20 **MS. KATE McGRANN:** So, the City has agreed that RTG can
21 achieve substantial completion even though there is a system-wide vehicle failure to
22 meet fleet requirements due to ongoing defects and deficiencies?

23 **MR. RICHARD HOLDER:** It was a deferred item to be closed prior
24 to revenue service availability.

25 **MS. KATE McGRANN:** Okay, but ---

26 **MR. RICHARD HOLDER:** That was the expectation at the time.

27 **MS. KATE McGRANN:** And just looking at these entries, right?
28 We haven't looked at all the entries on this agreed to list, but looking at these entries,

1 you'll want to step back for a second.

2 So, we've heard evidence from a number of people that the City
3 wants the system to be fully operational on Day One of public launch, right?

4 **MR. RICHARD HOLDER:** That's right.

5 **MS. KATE McGRANN:** And that means that all trains are running
6 as ---

7 **MR. RICHARD HOLDER:** Correct.

8 **MS. KATE McGRANN:** --- required by the PA?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And they're running at the reliability levels
11 required by the project agreement?

12 **MR. RICHARD HOLDER:** Correct.

13 **MS. KATE McGRANN:** And we've already talked about this, but
14 the substantial completion requirements in the project agreement are designed to
15 ensure that, at the time substantial completion is achieved, the only deficiencies left are
16 deficiencies that wouldn't affect the City's enjoyment of the system, right?

17 **MR. RICHARD HOLDER:** That's correct.

18 **MS. KATE McGRANN:** I think you will agree with me, sir, that
19 these two system-wide vehicle issues listed on this would certainly impact the City's
20 enjoyment of the system, right?

21 **MR. RICHARD HOLDER:** Well, at the time that the determination
22 was made, there was an understanding that the number of vehicles that were required
23 to meet passenger service was between 9 and 10 LRVs out of the available fleet of 34
24 vehicles. So, we knew at this time that it was unlikely, when we went -- it was unlikely
25 and unnecessary at revenue service availability that we would need all of the vehicles.
26 We needed to have 9 to 10 vehicles that were available to carry eight passengers --
27 eight passenger flows in the morning and afternoon peak periods.

28 So, this comment here is specifically related to fleet requirements.

1 So, at that time, we felt that they were not able to demonstrate, but it was the
2 expectation that between the award of substantial completion and revenue service
3 availability, that the reliability of those vehicles would have improved to the point that we
4 would be able to provide the requirements for passenger service so that the City could
5 have use and enjoyment of the system.

6 **MS. KATE McGRANN:** That is a lot of information, but it is not an
7 answer to my question. My question was that these system-wide vehicle failures would
8 certainly impact the City's enjoyment of the system, right?

9 **MR. RICHARD HOLDER:** They would.

10 **MS. KATE McGRANN:** I'm going to suggest to you, sir, that the
11 City's agreement to allow RTG to achieve substantial completion with these open issues
12 and other ones on the tracker as well undermined the protection that the project
13 agreement afforded to the City against receiving a system that didn't do what it was
14 supposed to do.

15 **MR. RICHARD HOLDER:** At that time, we were moving -- the next
16 step would have been moving into trial running. If the -- if this particular item of failures
17 to meet fleet requirements was not addressed prior to or during the trial running period,
18 then it would not have been possible for RTG to have achieved revenue service
19 availability. So, they were not at the end of their contractual requirement at this point.

20 **MS. KATE McGRANN:** Once again, that's not an answer to my
21 question, sir. My question was, would you agree with me that the City's agreement to
22 let RTG achieve substantial completion with all of these items outstanding undermined
23 the protection that the substantial completion milestone afforded the City?

24 **MR. RICHARD HOLDER:** That was not how it was considered at
25 the time.

26 **MS. KATE McGRANN:** Okay, but looking at it here today, would
27 you agree with me that this agreement undermined the protection that substantial
28 completion milestone afforded the City?

1 **MR. RICHARD HOLDER:** I think the protection is maintained by
2 the other language in the contract in terms of the need to pass trial running to achieve
3 revenue service availability.

4 **MS. KATE McGRANN:** Okay. Let's talk about trial running then.

5 **COMMISSIONER HOURIGAN:** Counsel, we'll take the morning
6 break then.

7 **MS. KATE McGRANN:** Okay.

8 **THE REGISTRAR:** Order. All rise. The Commission will recess
9 for 15 minutes.

10 --- Upon recessing at 10:29 a.m.

11 --- Upon resuming at 10:48 a.m.

12 **THE REGISTRAR:** Order, all rise.

13 The Commission has resumed.

14 **COMMISSIONER HOURIGAN:** Please proceed.

15 **--- MR. RICHARD HOLDER, Resumed:**

16 **--- EXAMINATION IN-CHIEF BY MS. KATE McGRANN, (Cont'd):**

17 **MS. KATE McGRANN:** Okay. So we're going to turn our attention
18 to trial running right now. And trial running commences basically right after substantial
19 completion is achieved, right?

20 **MR. RICHARD HOLDER:** There was a short period of pretrial
21 running before we moved into trial running.

22 **MS. KATE McGRANN:** Okay. So substantial completion is
23 achieved on Friday, July 26th?

24 **MR. RICHARD HOLDER:** Yes.

25 **MS. KATE McGRANN:** And trial running starts on Monday, July
26 29th?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KATE McGRANN:** And it runs for a total of 25 days from July

1 29th until August 22nd, 2019?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KATE McGRANN:** And in terms of how the performance on
4 trial running is evaluated, each day's performance was scored by a trial running review
5 team, right?

6 **MR. RICHARD HOLDER:** That's correct.

7 **MS. KATE McGRANN:** And that trial running review team is made
8 up of representatives from the City, RTG, RTM, and OLRT-C, right?

9 **MR. RICHARD HOLDER:** And the independent certifier.

10 **MS. KATE McGRANN:** Okay. And I will get there in just one
11 second, but you're absolutely right, the independent certifier is also on the team. So
12 from the City, it's you, Mr. Charter, and Larry Gaul, right?

13 **MR. RICHARD HOLDER:** That's correct.

14 **MS. KATE McGRANN:** And Claude Jacob was there for RTM?

15 **MR. RICHARD HOLDER:** Yes.

16 **MS. KATE McGRANN:** Peter Lauch, Matthew Slade, and William
17 Allman were the RTG representatives?

18 **MR. RICHARD HOLDER:** Yes.

19 **MS. KATE McGRANN:** And then a representative of the
20 independent certifier is also there?

21 **MR. RICHARD HOLDER:** That's correct.

22 **MS. KATE McGRANN:** Okay.

23 **MR. RICHARD HOLDER:** And Claude -- Claude Jacob was -- I
24 don't believe he was present for all the meetings. He occasionally had Tom Pate, who
25 was the Maintenance Manager, he was in attendance.

26 **MS. KATE McGRANN:** Okay. So he would step in as Mr. Jacob's
27 designate, basically ---

28 **MR. RICHARD HOLDER:** Yes.

1 **MS. KATE McGRANN:** --- was it not?

2 **MR. RICHARD HOLDER:** Yes.

3 **MS. KATE McGRANN:** Okay. And you said in your Commission
4 interview that the project agreement requirements for trial running were vague?

5 **MR. RICHARD HOLDER:** They were -- they were not very specific.
6 Yes, they were vague.

7 **MS. KATE McGRANN:** And so the City and RTG worked together
8 to determine specific criteria to be applied to the trial running period?

9 **MR. RICHARD HOLDER:** That's correct.

10 **MS. KATE McGRANN:** And criteria were agreed to as between the
11 City and RTG in 2017?

12 **MR. RICHARD HOLDER:** Correct.

13 **MS. KATE McGRANN:** And we know that then there's subsequent
14 criteria agreed to in 2019?

15 **MR. RICHARD HOLDER:** Correct.

16 **MS. KATE McGRANN:** That's what is used at the start of trial
17 running?

18 **MR. RICHARD HOLDER:** Correct.

19 **MS. KATE McGRANN:** And then at some point during trial running,
20 there's a change to the criteria that's to be applied, right?

21 **MR. RICHARD HOLDER:** Correct.

22 **MS. KATE McGRANN:** And we'll talk about that change in a bit
23 more detail in a minute. But first of all, I just want to walk through the process by which
24 the trial running review team does its scoring exercise.

25 So that team meets every day?

26 **MR. RICHARD HOLDER:** Correct.

27 **MS. KATE McGRANN:** And it receives information from a working
28 group that has met prior to the trial running review team meeting, right?

1 **MR. RICHARD HOLDER:** The working group would meet in the
2 morning and look at the data that was coming in from the field, and also from the
3 various systems that were tracking vehicle kilometres.

4 **MS. KATE McGRANN:** Okay. And so it's reviewing information
5 coming back from the IMIRS system, and the vehicle mileage reporting system, and
6 things like that?

7 **MR. RICHARD HOLDER:** Correct.

8 **MS. KATE McGRANN:** And it's providing a series of metrics to the
9 trial running review team?

10 **MR. RICHARD HOLDER:** Correct.

11 **MS. KATE McGRANN:** And then the trial running review team
12 looks at 12 criteria and determines whether each of those criteria have been passed or
13 failed on that particular day?

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KATE McGRANN:** And they would also determine whether, as
16 a result of the performance, the day qualified as a pass or a repeat or a restart for trial
17 running purposes?

18 **MR. RICHARD HOLDER:** Correct.

19 **MS. KATE McGRANN:** And in your Commission interview, you
20 said, "Then we made the recommendation to senior management." So that was -- the
21 daily report was sent on to John Manconi and to Michael Morgan, and then that senior
22 management group made decisions about what would potentially occur for the next day,
23 do you remember giving that evidence?

24 **MR. RICHARD HOLDER:** Correct.

25 **MS. KATE McGRANN:** And what decision is being made by Mr.
26 Manconi and Mr. Morgan for the next day there?

27 **MR. RICHARD HOLDER:** In terms of the TRRT reporting up to
28 Michael and to John Manconi and -- it was necessary to keep them informed of the

1 progress of the trial running in terms of what decisions they were making, if the process
2 -- if we had successive failed days over many, many days, if that had -- had it occurred,
3 then there would be implications for how the City would handle the changeover from the
4 bus rapid transit system to the rail system.

5 **MS. KATE McGRANN:** Okay.

6 **MR. RICHARD HOLDER:** So ---

7 **MS. KATE McGRANN:** So those ---

8 **MR. RICHARD HOLDER:** --- I ---

9 **MS. KATE McGRANN:** --- are sort of midterm plans that are being
10 made for what's going to take place after trial running, is that fair?

11 **MR. RICHARD HOLDER:** Correct, yes. They -- the -- in terms of
12 decisions that impacted us, the trial running team on a daily basis, we weren't expecting
13 to get feedback from Michael or John on a daily basis.

14 **MS. KATE McGRANN:** Okay. So when you say that Mr. Manconi
15 and Mr. Morgan would make decisions about what would potentially occur for the next
16 day, that sounds to me like it's something different than what's going to happen at the
17 end of trial running and how the handover will happen. The next day is the next day of
18 trial running. So what decisions would they be making about the next day?

19 **MR. RICHARD HOLDER:** Well, I believe that I was just referring to
20 the hypothetical situation such that if we had several fail days, and it was clear that we
21 were not going to achieve revenue service availability at the time when OC Transpo
22 was expecting to swap from the buses to the trains, then there would have been a
23 complete revisit of the trial running program.

24 **MS. KATE McGRANN:** And what would a complete revisit of the
25 trial running program involve?

26 **MR. RICHARD HOLDER:** Well, there would have -- we would have
27 suspended the trial running, and -- the expectation is we would have suspended trial
28 running, and there would have been a need to meet with RTG and look at all the issues

1 that were causing successive failures in the daily performance of the trial running
2 program. So that was a hypothetical situation.

3 **MS. KATE McGRANN:** Are the -- are the daily scorecards being
4 sent on to Mr. Manconi and Mr. Morgan or others in leadership at the City?

5 **MR. RICHARD HOLDER:** I think they were, yes.

6 **MS. KATE McGRANN:** And are you or Mr. Charter or Mr. Gaul
7 communicating with anyone from City leadership during the trial running review team
8 meetings?

9 **MR. RICHARD HOLDER:** I had a number of communications with
10 Michael. So, I would inform Michael of the progress, and that may have been in the
11 form of an email. I may have had a conversation, but there was also -- I was asked to
12 provide information on the trial running criteria, I believe on the 4th or 5th of August. I
13 was called into a meeting that was occurring with Michael and with John, and I believe
14 with other advisors to John. There was that communication. But, otherwise, there was
15 very limited communication between -- certainly between me and Michael. I was
16 communicating with Michael about other matters related to the project, and not just
17 related to the trial running process.

18 **MS. KATE McGRANN:** To your knowledge, were any of the City
19 representatives on the trial running review team seeking input, feedback or direction
20 from anybody else at the City on how to score the results of any particular day's
21 performance?

22 **MR. RICHARD HOLDER:** I'm not aware of any of that direction
23 occurring.

24 **MS. KATE McGRANN:** And in terms of communications that you
25 were engaging in, you've identified emails, and we know that you were communicating
26 via text message, right?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KATE McGRANN:** Were you communicating via any other

1 messaging platforms?

2 **MR. RICHARD HOLDER:** No.

3 **MS. KATE McGRANN:** Turning now to the criteria. So, in 2019,
4 prior to the start of trial running, your evidence was that the 2017 criteria was reviewed
5 by the City and OLRTC, and some changes were made, right?

6 **MR. RICHARD HOLDER:** That's correct.

7 **MS. KATE McGRANN:** And a decision was made to proceed to
8 trial running using the new 2019 criteria?

9 **MR. RICHARD HOLDER:** That's correct. There were a number of
10 changes which were made to that 2019 criteria in the days leading up to the beginning
11 of trial running.

12 **MS. KATE McGRANN:** And the City and RTG both agreed to use
13 the 2019 criteria? There was no question about that?

14 **MR. RICHARD HOLDER:** There was no question. There was
15 agreement.

16 **MS. KATE McGRANN:** And as far as the decision to accept and
17 use the 2019 criteria for the City, that decision was made by you from a delivery
18 perspective?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** And for Mr. Charter and Mr. Scrimgeour
21 from an operations perspective?

22 **MR. RICHARD HOLDER:** Correct.

23 **MS. KATE McGRANN:** And you've already acknowledged that
24 during trial running, changes were made to the criteria to be identified. And just to
25 understand the implications of those changes, I want to take you to your April 26, 2022,
26 Commission interview transcript, and that's at TRN 25.

27 And if we could go to page 116 of the PDF? And I think we may
28 have to use the image option to get to the page I'm hoping to land on. So, if we could

1 just scroll down to the next page? That's great. I'd like to look at line 12 and onwards.

2 So, you're discussing the two criteria, and you say, "So, we were
3 quite satisfied with the 2017," and that's the 2017 trial running criteria?

4 **MR. RICHARD HOLDER:** Correct.

5 **MS. KATE McGRANN:** And you say, "When we moved to the
6 2019 version, that is agreed between new members to the team. There was a feeling
7 that 'Okay, well, they're really setting the bar extremely high now for the demonstration
8 of this system.'" And that's a reference to where the bar is set by the 2019 criteria, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And you go on to say, "And certainly way
11 higher than had previously been considered to be acceptable." And I take it what you're
12 saying there, sir, is the 2019 bar is set way higher than the bar set by the 2017 criteria,
13 right?

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KATE McGRANN:** And you say, "But the City was not going
16 to necessarily argue about that higher level of expectation that had been set by RTG."
17 So, I take it that the City was not going to push back and say, "No, you don't have to
18 meet that higher bar," right?

19 **MR. RICHARD HOLDER:** That's correct.

20 **MS. KATE McGRANN:** And we can take that transcript down now.
21 Was it the case that the 2019 criteria more closely replicated the expectations for the
22 system performance as set out in the project agreement?

23 **MR. RICHARD HOLDER:** In terms of the target that it set for an
24 average AVKR of 98 per cent, then that's very close to the level of availability that we're
25 expecting to have on the system, over 98 per cent.

26 **MS. KATE McGRANN:** Okay. And AVKR is aggregate vehicle
27 kilometre availability ratio?

28 **MR. RICHARD HOLDER:** Correct.

1 **MS. KATE McGRANN:** And I'm going to ask that we now turn up
2 OTT 3177178.

3 **--- EXHIBIT No. 122:**

4 OTT03177178 – OLRT Project Trial Running Test Procedure
5 31 August 2019

6 **MS. KATE McGRANN:** And if we could just scroll down a little bit,
7 this, sir, is the 2019 trial running test procedure. This is the 2019 criteria we've been
8 discussing, right?

9 **MR. RICHARD HOLDER:** Correct.

10 **MS. KATE McGRANN:** And if we could go to page 18 of this
11 document, this is an image of the score card that the trial running review team fills out
12 every day, right?

13 **MR. RICHARD HOLDER:** Correct.

14 **MS. KATE McGRANN:** I know we're a little short on time, but I do
15 think that we'll all benefit from you walking us through how this score card worked at a
16 high level. So, let's take a look at it. Starting on the left-hand side, there's a number of
17 entries, and the first one is safety. Do you see that?

18 **MR. RICHARD HOLDER:** Yes.

19 **MS. KATE McGRANN:** And that was graded on a pass, repeat,
20 restart basis?

21 **MR. RICHARD HOLDER:** I believe so.

22 **MS. KATE McGRANN:** And then under the heading "operational,"
23 we've got travel time?

24 **MR. RICHARD HOLDER:** Yes.

25 **MS. KATE McGRANN:** ATO mode?

26 **MR. RICHARD HOLDER:** Yes.

27 **MS. KATE McGRANN:** And that's automatic train operation
28 mode?

1 **MR. RICHARD HOLDER:** It is.

2 **MS. KATE McGRANN:** Twenty-three minutes.

3 **MR. RICHARD HOLDER:** Yes. That was the expectation for the
4 travel time from end to end.

5 **MS. KATE McGRANN:** Perfect. And then weekday headway --
6 I'm sorry the text is a little blurry, but that says weekday headway there, and it says
7 three out of four required to pass. What's headway?

8 **MR. RICHARD HOLDER:** So, headway is the time between trains
9 arriving at the station. So, this is the time that a customer would experience between
10 trains.

11 **MS. KATE McGRANN:** Okay. And this is only scored on
12 weekdays, right?

13 **MR. RICHARD HOLDER:** In terms of a peak period, we only have
14 peak periods from Monday to Friday. So, this particular method of assigning scores
15 was used from Monday to Friday, and there were -- we utilized other criteria in the score
16 card for scoring the weekends.

17 **MS. KATE McGRANN:** Okay. And more specifically, you're
18 looking at the morning between 6:45 and 8:45, right?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** And the afternoon between 3:00 and 5:00.

21 **MR. RICHARD HOLDER:** Yeah, in each direction. Yes.

22 **MS. KATE McGRANN:** Okay. And in order to pass this, you're
23 required to meet the requirements on three out of four of these entries?

24 **MR. RICHARD HOLDER:** Correct.

25 **MS. KATE McGRANN:** Okay. And the requirement is that 94 per
26 cent of the trains meet or beat the headway requirement, right?

27 **MR. RICHARD HOLDER:** That's right. There is a percentage and
28 then there is also a number of trains. So, the number of trains were important because

1 it allowed for the City to actually have spotters on a platform, and actually count the
2 number of trains that were passing during that period to compare against the data that
3 was coming from the IMIRS program.

4 **MS. KATE McGRANN:** Okay. And then if we move down in the
5 list of items, the next one is maintenance delivery. We see that that's being graded on
6 two fronts, first, maintenance practices?

7 **MR. RICHARD HOLDER:** Yeah, which was based -- do you want
8 me to explain that definition?

9 **MS. KATE McGRANN:** In the interest of time, we'll rely on the
10 description that's in the criteria that everybody has access to. With you, I'd like to work
11 through -- we've got two heads of scoring here, maintenance practice is one, right?

12 **MR. RICHARD HOLDER:** Yes.

13 **MS. KATE McGRANN:** And then the demonstration of the IMIRS
14 process, right?

15 **MR. RICHARD HOLDER:** Yes.

16 **MS. KATE McGRANN:** And at a high level, the IMIRS, that system
17 is the means by which operations, control centre and maintenance communicate with
18 each other about issues that require attention, right?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** Okay. And both of those items are graded
21 on a pass/fail basis?

22 **MR. RICHARD HOLDER:** Yes.

23 **MS. KATE McGRANN:** And then there's a provision in the trial
24 running criteria that determines where poor performance on either of these may result in
25 a repeat or a restart, correct?

26 **MR. RICHARD HOLDER:** Correct.

27 **MS. KATE McGRANN:** Okay, and then the vehicle availability --
28 and that's the AVKR that we discussed a moment ago, that's calculated using a formula,

1 right?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KATE McGRANN:** And there's two requirements here; one,
4 there's got to be a minimum daily average of 90 percent?

5 **MR. RICHARD HOLDER:** Correct.

6 **MS. KATE McGRANN:** And two, over 12 days, the average has to
7 be 98 percent?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And what's the AVKR intended to
10 measure, as far as system performance?

11 **MR. RICHARD HOLDER:** It's the -- it's broadly measuring the
12 number of trains that are out on the track providing service for customers.

13 **MS. KATE McGRANN:** And so if there's -- if there's reliability
14 issues with the vehicles, you would expect that to be reflected in the AVKR?

15 **MR. RICHARD HOLDER:** Correct.

16 **MS. KATE McGRANN:** And then, finally, but not to diminish this,
17 there's a look at the station availability, and there's a ratio required there.

18 **MR. RICHARD HOLDER:** Correct.

19 **MS. KATE McGRANN:** And then there's a series of customer
20 systems and other major systems that are scored, and there's a ratio required there as
21 well.

22 **MR. RICHARD HOLDER:** Correct.

23 **MS. KATE McGRANN:** Okay. So from this 2019 criteria, we're
24 now going to go and take a look at the changes that are made during the trial running
25 period and to do that, we've got to take a look at COW270758.

26 **--- EXHIBIT No. 123:**

27 COW0270758 – Letter from Altus to City of Ottawa and RTG
28 23 August 2019

1 Okay, so this is the validation of trial running acceptance from the
2 independent certifier, dated August 23rd, 2019. And if we go to the third page of this
3 document, this is the Trial Running Review Team Conclusion of Trial Running
4 Statement. And if we look at the second paragraph this describes the changes that are
5 made to the trial running criteria during the trial running period. So let's walk through
6 these changes one at a time.

7 So paragraph says:

8 "As peak service performance was achieved over
9 several days, the Trial Running Review Team agreed
10 to reduce the peak service fleet size to 13 from 15
11 trains." (As read)

12 And so the change that's being described here is that we're going
13 from a requirement that 15 trains be put out during peak service down to a requirement
14 that 13 trains be put out during peak service, right?

15 **MR. RICHARD HOLDER:** That's correct.

16 **MS. KATE McGRANN:** And would you agree with me that it would
17 be easier to reliability to get 13 trains out on the line than it would be to get 15 trains out
18 during the line?

19 **MR. RICHARD HOLDER:** I would agree.

20 **MS. KATE McGRANN:** And we've heard evidence that RTG was
21 struggling to get 15 trains out on the line and keep them out on the line, is that
22 consistent with what you understood was happening during trial running?

23 **MR. RICHARD HOLDER:** They were having challenges to get out
24 15 trains in the morning, that's correct.

25 **MS. KATE McGRANN:** Okay. And I'm going to suggest that one
26 of the reasons that they're struggling to get 15 trains out during the morning is because
27 is the maintenance staff are overwhelmed by maintenance requirements during the day,
28 and night shift the previous day?

1 **MR. RICHARD HOLDER:** I'm not sure that that is the main reason
2 why those trains were not available. There were -- we know that there were still
3 reliability issues with some of the vehicles. We know that some -- as has been
4 reported, some of the vehicles arrived at the hand-over platform and they were not
5 ready, so they had to be returned. So there were issues with -- there were issues with
6 the vehicles.

7 In terms of the contribution of the maintenance practices, I'm not
8 sure of the full contribution that that had to lack of availability of trains at the morning
9 launch.

10 **MS. KATE McGRANN:** Okay. And I don't want to lose our focus
11 on the changes that are made to trial running here, but I will say that Mr. Fodor, the
12 City's maintenance subject matter expert, gave evidence yesterday that, based on his
13 observations of trial running, the maintenance team was overwhelmed by maintenance
14 demands during the entire that he was observing trial running. Did that information
15 make its way to you?

16 **MR. RICHARD HOLDER:** The information that Tom provided to
17 me was a daily report, or, more accurately, a nightly report because Tom was present at
18 the yard control centre for the first several days of trial running and he reported back on
19 the receipt of the vehicles in the evening, the maintenance practices that occurred
20 overnight, and the process to launch the vehicles in the morning. And as part of that
21 reporting to me, he indicated that the appropriate processes were being followed and
22 the appropriate maintenance practices were occurring in support of revenue service.

23 **MS. KATE McGRANN:** Okay, well, let me ask you this; is it your
24 evidence, sir, that -- that it was not brought to your attention, and you were not aware,
25 that the maintenance team was overwhelmed with the maintenance requirements
26 through the trial running period? That's something that you were not aware of at any
27 point?

28 **MR. RICHARD HOLDER:** I was aware that the maintenance team

1 were extremely busy with lots of activities, but I was informed through documents by
2 Tom Fodor that the practices were in place were sufficient to support trial running.

3 **MS. KATE McGRANN:** Okay. Let's turn back to this paragraph
4 here. So we've talked about the reduction in required fleet size from 15 to 13 trains, and
5 you've agreed that it's easier to get 13 trains out than 15, right?

6 **MR. RICHARD HOLDER:** Correct.

7 **MS. KATE McGRANN:** And then it says:

8 "Additionally, the Trial Running Review Team agreed
9 to apply the trial running criteria as stated in
10 RFIO266." (As read)

11 That's the 2017 criteria, right?

12 **MR. RICHARD HOLDER:** Correct

13 **MS. KATE McGRANN:** "As such, it was agreed that the average
14 aggregate vehicle kilometre ratio..." (As read)

15 And that's the AVKR number we've discussed already?

16 **MR. RICHARD HOLDER:** That's right.

17 **MS. KATE McGRANN:** "...would result in a pass with the
18 achievement of an AAVKR of 96 percent or higher."
19 (As read)

20 So let's just pause there for a second. I'm right in understanding
21 that the team has agreed to reduce the AVKR requirement from 98 percent to 96
22 percent, right?

23 **MR. RICHARD HOLDER:** That's correct.

24 **MS. KATE McGRANN:** And you'll agree with me that it's easier to
25 reach an AVKR of 96 than it would be to reach an AVKR of 98 percent?

26 **MR. RICHARD HOLDER:** Correct.

27 **MS. KATE McGRANN:** And then another change that's made is
28 that the AVKR of 96 or higher has to be achieved on only 9 out of 12 days, right?

1 **MR. RICHARD HOLDER:** Correct. So we were reverting back to
2 the originally 2017 version of the trial running ---

3 **MS. KATE McGRANN:** And so ---

4 **MR. RICHARD HOLDER:** --- document.

5 **MS. KATE McGRANN:** --- you've gone from a requirement that an
6 average would be achieved over all 12 days to a requirement that the average be
7 achieved sort of on the best 9 out of 12 days, right?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KATE McGRANN:** And it's going to be easier to achieve any
10 average if you can pick your best 9 out of 12 days than if you've got to meet it over all
11 12 days, right?

12 **MR. RICHARD HOLDER:** Correct.

13 **MS. KATE McGRANN:** And then, finally, the 2019 criteria required
14 that no -- my goodness; no AVKR be lower than 90 percent. You couldn't have any day
15 where the AVKR was lower than 90 percent, right?

16 **MR. RICHARD HOLDER:** Correct.

17 **MS. KATE McGRANN:** And that's changed here to no three
18 consecutive days below 94 percent?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** And I think you'll agree with me that the
21 2017 criteria would allow you to have two very bad days? And the reason I say that is,
22 one, they're not going to be counted in your best 9 of 12 days, right?

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KATE McGRANN:** And you can have two very bad days in a
25 row and still not be offside the requirement that three consecutive days be below 94
26 percent?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KATE McGRANN:** So, on the whole, I think you'll agree with

1 me that the 2017 criteria is easier to meet than the 2019 criteria?

2 **MR. RICHARD HOLDER:** That's agreed.

3 **MS. KATE McGRANN:** Now, in the interest of time, I'm not going
4 to run through, in any kind of detail -- we can take this document down -- the
5 maintenance performance during trial running, but I will ask you this. So maintenance is
6 -- you understand that they are struggling during trial runnings to meet the
7 requirements?

8 **MR. RICHARD HOLDER:** Yes.

9 **MS. KATE McGRANN:** And you also know that there's the minor
10 deficiencies list that's outstanding that's going to have to be addressed once the system
11 gets into revenue service, if it hasn't been already?

12 **MR. RICHARD HOLDER:** Well, that was being addressed at the
13 time of trial running, so that was part of the issue with the challenge for the maintenance
14 teams and the other teams that were working during the night.

15 **MS. KATE McGRANN:** Okay. And there's a number of retrofits
16 that are required for the vehicles that still need to be completed?

17 **MR. RICHARD HOLDER:** Correct.

18 **MS. KATE McGRANN:** And in addition to the minor deficiencies
19 list, there's the post-substantial completion deficiencies list that needs to be addressed?

20 **MR. RICHARD HOLDER:** Correct.

21 **MS. KATE McGRANN:** And so given all of that, what was the
22 City's view on whether maintenance would be able to keep up with the demands of
23 revenue service and the various outstanding list of deficiencies that needed to be
24 addressed?

25 **MR. RICHARD HOLDER:** Well, the assertion from RTM and RTG
26 was that they would have additional people that would be available to undertake the
27 extra work that was required within those few weeks and months of revenue service
28 until the deficiencies had been dealt with and until the -- and until reliability issues had

1 improved with the rectification of the various retrofit programs that were in place.

2 **MS. KATE McGRANN:** Okay. So increasing staffing is RTM's
3 proposed solution for dealing with this issue?

4 **MR. RICHARD HOLDER:** Correct.

5 **MS. KATE McGRANN:** Mr. Fodor is the City's maintenance
6 subject matter expert; right?

7 **MR. RICHARD HOLDER:** Correct.

8 **MS. KATE McGRANN:** He was asked yesterday whether
9 increasing staffing would address the issues that he observed during trial running and
10 his response was that, that was a difficult question to answer and then he went on and
11 gave some details.

12 It's my understanding that the City did not consult with Mr. Fodor on
13 the question of whether increased staffing would address this issue and whether that
14 would support an open for revenue service.

15 **MR. RICHARD HOLDER:** I did not discuss that with Mr. Fodor;
16 that was his opinion. The opinion from RTM and RTG was that they would be able to
17 bring necessary resources to deal with the increased level of work that was required
18 within the first few weeks of revenue service.

19 **MS. KATE McGRANN:** To your knowledge did any of the experts
20 who were advising the City on this project, agree that RTM's proposal would address
21 the issues for maintenance?

22 **MR. RICHARD HOLDER:** We had a number of consultants
23 working for the City, working on different aspects of the project. Tom Fodor was very
24 much focussed on maintenance practices and the documentation that was required as
25 part of the project agreement, achieve substantial completion. We had other experts
26 working for the City that were more focussed on, for instance, the vehicle and the train
27 control system. So the experts that we had working on the vehicle were very, very
28 familiar with the types of issues that were occurring on the vehicle and were very aware

1 of the retrofit program that was being managed by Alstom. And they did not raise
2 concerns about the system going into service. They did not raise concerns about the
3 program that was proposed by RTG and Alstom for raising the reliability of the vehicles.

4 **MS. KATE McGRANN:** Were any of those experts asked to opine
5 on whether RTM's proposal was likely to be successful?

6 **MR. RICHARD HOLDER:** I believe they were, yes.

7 **MS. KATE McGRANN:** And who was asked?

8 **MR. RICHARD HOLDER:** I believe it would have been Scott
9 Krieger.

10 **MS. KATE McGRANN:** And what was his response?

11 **MR. RICHARD HOLDER:** He was – I was not there at the time
12 that he was asked that question, but as part of the executive group that was meeting on
13 a regular basis he was one of the experts that was providing advice to John Manconi
14 and to Michael Morgan along with Tom Prendergast and I am expecting – I do not know
15 for sure, I am expecting that he would have provided an opinion that Alstom would have
16 been able to deal with the retrofication program that was required beyond revenue
17 service.

18 **MS. KATE McGRANN:** And that's a guess on your part, sir, right?
19 You're guessing?

20 **MR. RICHARD HOLDER:** It is.

21 **MS. KATE McGRANN:** I'm going to suggest to you that the City
22 knew that there were reliability issues with the system at the time that it decided to
23 launch public service?

24 **MR. RICHARD HOLDER:** We knew that there would be some
25 reliability issues, yes, we did.

26 **MS. KATE McGRANN:** And you knew that those issues – sorry,
27 go ahead.

28 **MR. RICHARD HOLDER:** We certainly didn't anticipate that there

1 would be reliability issues to the extent that we would have derailments.

2 **MS. KATE McGRANN:** The city knew that the reliability issues
3 could interfere with the provision of reliable service to the public?

4 **MR. RICHARD HOLDER:** We knew that there may be issues. In
5 terms of the reliability data, it was being provided to us by Alstom. They were indicating
6 that the number of events that were occurring on the fleet had significantly reduced in
7 the period between substantial completion and revenue service.

8 **MS. KATE McGRANN:** That is not an answer to the question, sir.
9 My question was, the City knew that there were reliability issues
10 that could interfere with the provision of reliable service to the public?

11 **MR. RICHARD HOLDER:** That's correct.

12 **MS. KATE McGRANN:** And I'm going to suggest to you, that given
13 the issues that the City was aware of, and that the City discovered following the
14 achievement of substantial completion, the City knew that there was a real risk that
15 more issues would be discovered as the system continued to run?

16 **MR. RICHARD HOLDER:** There was a potential for that risk.

17 **MS. KATE McGRANN:** And the City was aware of that?

18 **MR. RICHARD HOLDER:** Yes.

19 **MS. KATE McGRANN:** Why did the City decide to launch public
20 service on September 14th given all of those things?

21 **MR. RICHARD HOLDER:** In a determination of the team, we felt
22 that the project agreement requirements had been met in terms of the trial running
23 performance and the requirements for revenue service availability.

24 **MS. KATE McGRANN:** Well, I think to be fair, sir, the City entered
25 into a term sheet with RTG in order to allow RTG to meet revenue service availability
26 that adjusted some of the requirements of the project agreement; isn't that right?

27 **MR. RICHARD HOLDER:** It didn't adjust the requirement for trial
28 running. It didn't make major changes to the overall provisions within the project

1 agreement in terms of the City's right to impose penalties for poor performance during
2 revenue. It was the team's position that the commercial consequences on RTG for
3 failing to deliver the requirements of the PA, after revenue service, were extreme. The
4 failure for RTG to provide availability on a day-to-day basis would have resulted in
5 significant financial impacts for all the companies involved. It was RTG that was
6 asserting to the City that the system was ready.

7 **MS. KATE McGRANN:** Okay. Well, let's dig into that for a minute.
8 RTG is asserting to the City that it's ready for revenue service
9 availability as described – as defined in the project agreement; right?

10 **MR. RICHARD HOLDER:** Correct.

11 **MS. KATE McGRANN:** And for RTG, that means that either – well,
12 first it means it's going to get a significant payment upon the achievement of revenue
13 service availability; right?

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KATE McGRANN:** And then following that, and the City's
16 decision to launch the system into public service, as far as RTG is concerned, it's either
17 going to meet the requirements of the project agreement and get its monthly payment;
18 right?

19 **MR. RICHARD HOLDER:** Correct.

20 **MS. KATE McGRANN:** Or it will suffer the consequences that it
21 has agreed to suffer in the project agreement; right?

22 **MR. RICHARD HOLDER:** Correct.

23 **MS. KATE McGRANN:** That's RTG's position. The City is
24 providing this system to the public; right?

25 **MR. RICHARD HOLDER:** Correct.

26 **MS. KATE McGRANN:** The City's obligation at this point in time to
27 determine when to put the system into service for its public?

28 **MR. RICHARD HOLDER:** Correct.

1 **MS. KATE McGRANN:** So RTG is not part of this decision-making
2 project anymore; I'm going to suggest to you that RTG's representations are kind of
3 irrelevant at this point in time to the City's decision about when to put the service – the
4 system into public service. That's a decision the City makes on its own?

5 **MR. RICHARD HOLDER:** The City can provide an opinion, yes.

6 **MS. KATE McGRANN:** Well, the City chooses the start date.

7 **MR. RICHARD HOLDER:** The contract contemplated revenue
8 service availability starting the day after, all RSA requirements being achieved.

9 **MS. KATE McGRANN:** And the City chose not to do that?

10 **MR. RICHARD HOLDER:** The City chose not to do that. The City
11 chose to have a period in between RSA and the start of passenger services.

12 **MS. KATE McGRANN:** So I think you're agreeing with me, sir, that
13 the public service launch date is entirely within the City's control?

14 **MR. RICHARD HOLDER:** Correct, correct..

15 **MS. KATE McGRANN:** And I'm going to suggest to you that the
16 City knew when it picked the launch date, that the system was not going to perform
17 reliably; there were too many risks to reliable service that were not going to perform
18 reliably. There were too many risks to reliable service that were known to the City at
19 that time.

20 **MR. RICHARD HOLDER:** I think the City was aware that the
21 reliability of the system would improve over time, but at the beginning of revenue
22 service availability, that there may be issues that would impact availability.

23 **MS. KATE McGRANN:** Those are my questions. Thank you very
24 much for your time.

25 **COMMISSIONER HOURIGAN:** All right. Thank you, Counsel. Mr.
26 Holder, you'll now have questions from some or all of a number of parties. The first
27 party up is RTG OLRTC RTM. Yes, Counsel.

28 **MS. KARTIGA THAVARAJ:** Thank you, Mr. Commissioner.

1 Kartiga Thavaraj for the RTG parties. That's K-A-R-T-I-G-A, T-H-A-V-A-R-A-J. Sorry, is
2 there an echo?

3 **MR. RICHARD HOLDER:** I don't hear one.

4 **MS. KARTIGA THAVARAJ:** Apologies. I'm getting note from the
5 Zoom host, and I think this is better. Is that right, Marc? Great, thank you. Apologies,
6 Mr. Commissioner.

7 **--- CROSS EXAMINATION BY MS. KARTIGA THAVARAJ:**

8 **MS. KARTIGA THAVARAJ:** Mr. Holder, good morning. I'm
9 counsel for the RTG parties.

10 **MR. RICHARD HOLDER:** Good morning.

11 **MS. KARTIGA THAVARAJ:** I'd like to speak to you briefly about
12 the field observation team and the entering of work orders into IMIRS you spoke about
13 in your formal interview. The field observation team was your idea; is that ---

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KARTIGA THAVARAJ:** --- correct? And you say that the
16 team was tasked with sort of mock using the system during trial running and after trial
17 running.

18 **MR. RICHARD HOLDER:** Correct.

19 **MS. KARTIGA THAVARAJ:** And their role was to behave like a
20 surrogate commuter system?

21 **MR. RICHARD HOLDER:** Correct.

22 **MS. KARTIGA THAVARAJ:** So, the field team was out on the
23 system using the doors, elevators, fare gates?

24 **MR. RICHARD HOLDER:** Correct.

25 **MS. KARTIGA THAVARAJ:** And finding issues with these items, if
26 any?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KARTIGA THAVARAJ:** And finding also what you called in

1 your formal interview “cosmetic deficiencies”?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KARTIGA THAVARAJ:** Scuffed paint, dust on a speaker?

4 **MR. RICHARD HOLDER:** Correct.

5 **MS. KARTIGA THAVARAJ:** And you considered these to be
6 cosmetic?

7 **MR. RICHARD HOLDER:** Correct.

8 **MS. KARTIGA THAVARAJ:** Now, for these, the field team was
9 instructed to log work orders through IMIRS?

10 **MR. RICHARD HOLDER:** The field team was, as part of the
11 process of working the system, challenging the system, the field observation team used
12 the emergency telephones or ITELs to communicate with the TOCC when they saw an
13 issue with a system not functioning as they were expecting. So, it was not the field
14 observation team directly that was inputting information into IMIRS. There was a report
15 provided to the TOCC, and then it was the operators at the TOCC control room that
16 chose how and when to submit those work orders through the IMIRS help desk to RTM.

17 **MS. KARTIGA THAVARAJ:** I see. That’s very helpful. And so,
18 when the TOCC chose how and when -- the TOCC is the City, of course, correct?

19 **MR. RICHARD HOLDER:** Correct. Yes.

20 **MS. KARTIGA THAVARAJ:** And when the TOCC shows how and
21 when to input work orders -- maybe we’ll just step back for a second. How IMIRS is
22 intended to work, sir, I think you’ll agree, is that the TOCC sends a help desk request ---

23 **MR. RICHARD HOLDER:** Correct.

24 **MS. KARTIGA THAVARAJ:** --- and RTG -- in fact, RTM and
25 Alstom maintenance staff open a work order and do the work; is that correct?

26 **MR. RICHARD HOLDER:** Correct.

27 **MS. KARTIGA THAVARAJ:** And so, the proper process is that the
28 City sends a help desk request and RTM enters a work order?

1 **MR. RICHARD HOLDER:** Correct.

2 **MS. KARTIGA THAVARAJ:** But at the beginning, the City was
3 entering work orders itself?

4 **MR. RICHARD HOLDER:** That's correct.

5 **MS. KARTIGA THAVARAJ:** And this occurred for a few months,
6 from trial running up until a few months into revenue service?

7 **MR. RICHARD HOLDER:** Until November when RTM took over
8 that role of inputting the work orders.

9 **MS. KARTIGA THAVARAJ:** Correct. And so, during the regular
10 course of operation, help desk requests are sent and work orders are entered, correct?

11 **MR. RICHARD HOLDER:** Correct.

12 **MS. KARTIGA THAVARAJ:** But during this time, the TOCC was
13 entering work orders themselves?

14 **MR. RICHARD HOLDER:** Correct.

15 **MS. KARTIGA THAVARAJ:** And you know that because of --
16 through the project agreement, RTG and RTM are -- there are deductions associated
17 with these work orders?

18 **MR. RICHARD HOLDER:** Correct.

19 **MS. KARTIGA THAVARAJ:** And there are response and
20 rectification times associated?

21 **MR. RICHARD HOLDER:** Correct.

22 **MS. KARTIGA THAVARAJ:** Meaning that RTM has to respond
23 within a particular time for certain items?

24 **MR. RICHARD HOLDER:** Correct.

25 **MS. KARTIGA THAVARAJ:** And fix certain items within a
26 particular time?

27 **MR. RICHARD HOLDER:** Correct.

28 **MS. KARTIGA THAVARAJ:** Or else it's levied deductions against

1 -- there are deductions levied against it?

2 **MR. RICHARD HOLDER:** Correct.

3 **MS. KARTIGA THAVARAJ:** And so, receiving these work orders
4 on time allows RTG to respond appropriately?

5 **MR. RICHARD HOLDER:** Correct.

6 **MS. KARTIGA THAVARAJ:** And in a timely fashion when these
7 orders are received?

8 **MR. RICHARD HOLDER:** Correct.

9 **MS. KARTIGA THAVARAJ:** But at the beginning of revenue
10 service, this is not what the field team did.

11 **MR. RICHARD HOLDER:** The field ---

12 **MS. KARTIGA THAVARAJ:** And by "field team," I mean the
13 TOCC, sir, in this instance. The TOCC did not input work orders one by one into the
14 IMIRS system.

15 **MR. RICHARD HOLDER:** I am aware that there was a period of
16 time where they submitted work orders as a batch, I believe at the end of the night
17 around midnight, and that occurred for a few days. But I think that practice was stopped
18 quite quickly, after it was reported back at the TRRT.

19 **MS. KARTIGA THAVARAJ:** So, this Commission will hear from
20 RTM witnesses, sir, that this practice did not stop quite quickly. In fact, to your point, at
21 one point earlier on, about 109 work orders were entered at once. Do you recall that?

22 **MR. RICHARD HOLDER:** I don't recall the specifics, but I don't
23 deny that it happened.

24 **MS. KARTIGA THAVARAJ:** Okay. And these work orders, when
25 they were entered as batches near midnight, then, would have meant that RTM --
26 RTG's -- when I say RTG, that, of course, includes RTM and Alstom, but RTG's
27 response and rectification times would have started at that time, correct?

28 **MR. RICHARD HOLDER:** I am not clear on how the system

1 functions. So, I don't -- I am not clear whether it's related to when the work order is
2 received, or whether it's related to a time which is provided in the work order when the
3 deficiency was actually identified. I'm not familiar enough with that system as to when
4 the clock starts ticking.

5 **MS. KARTIGA THAVARAJ:** I see. So, if it was when the item was
6 identified, that would be prior to the work order being inputted?

7 **MR. RICHARD HOLDER:** It would.

8 **MS. KARTIGA THAVARAJ:** And so, it would run, let's say, either
9 from the deficiency being identified or the work order being inputted, but it would run
10 from that period?

11 **MR. RICHARD HOLDER:** Yes.

12 **MS. KARTIGA THAVARAJ:** And, of course, having batches of
13 work orders entered shortly before midnight, you're aware that this would overwhelm
14 the RTM staff, particularly night staff who would be working at midnight?

15 **MR. RICHARD HOLDER:** I was not aware that it would overwhelm
16 the staff. I understand when that practice was brought forward at TRRT, that we
17 understood that that was a challenge for RTM staff receiving those batches. And so, we
18 discussed changing that practice.

19 **MS. KARTIGA THAVARAJ:** In your formal interview, sir, and I can
20 take you to it, but you do -- you did mention that RTM had raised the issue of being
21 overwhelmed with you after the TOCC did the same thing with respect to the
22 emergency calls. Do you recall that?

23 **MR. RICHARD HOLDER:** I do.

24 **MS. KARTIGA THAVARAJ:** Okay. And you are aware that --
25 correct me if I'm wrong, I think you're aware that this work continued past trial running
26 into revenue service?

27 **MR. RICHARD HOLDER:** The practice of the batching of work
28 orders?

1 **MS. KARTIGA THAVARAJ:** Yes.

2 **MR. RICHARD HOLDER:** I was not aware that that continued after
3 the trial running.

4 **MS. KARTIGA THAVARAJ:** Okay. If I told you it did continue, you
5 have no reason right now to doubt that?

6 **MR. RICHARD HOLDER:** No.

7 **MS. KARTIGA THAVARAJ:** And that, in fact, the batching
8 continued a number of months into revenue service, forcing RTM to continue to respond
9 in this way while revenue service was ongoing?

10 **MR. RICHARD HOLDER:** I don't have a comment on that because
11 I'm not aware.

12 **MS. KARTIGA THAVARAJ:** Okay. Okay, thank you very much.
13 Thank you, Mr. Commissioner. Those are my questions.

14 **COMMISSIONER HOURIGAN:** All right. Thank you, Counsel.
15 Next is Alstom.

16 **MR. MICHAEL VALO:** Good morning, Mr. Commissioner. Good
17 morning, Mr. Holder. My name is Michael Valo, V-A-L-O, and I'm a lawyer for Alstom,
18 and I've got a few questions for you.

19 **--- CROSS-EXAMINATION BY MR. MICHAEL VALO:**

20 **MR. MICHAEL VALO:** Mr. Holder, are you familiar with the
21 SCADA alarm system?

22 **MR. RICHARD HOLDER:** Yes.

23 **MR. MICHAEL VALO:** And SCADA, it's hardware and software
24 that provides alarms and messages about the status of various systems, and allows the
25 control centre, for example, to command things in stations, and ventilation systems,
26 power systems, and it's all integrated into one overall system; is that right?

27 **MR. RICHARD HOLDER:** Correct.

28 **MR. MICHAEL VALO:** And you track all of the subsystems through

1 a single computer interface. That's how SCADA works, right?

2 **MR. RICHARD HOLDER:** Correct.

3 **MR. MICHAEL VALO:** So given that you would agree, I think, that
4 SCADA is a critical system overall to -- a critical subsystem, excuse me, to the overall
5 system?

6 **MR. RICHARD HOLDER:** In terms of receiving information and
7 providing control, yes.

8 **MR. MICHAEL VALO:** Sure, because the information that is
9 passed through SCADA could be critical.

10 **MR. RICHARD HOLDER:** Correct.

11 **MR. MICHAEL VALO:** It could also be very mundane.

12 **MR. RICHARD HOLDER:** Correct.

13 **MR. MICHAEL VALO:** Simple information. And a properly
14 functioning SCADA system, sir, it would be necessary for the safe and efficient
15 command and control of the overall system. Would you agree with that?

16 **MR. RICHARD HOLDER:** I would agree.

17 **MR. MICHAEL VALO:** And it's one of the systems that had to be
18 completed and commissioned by LRTC before they could achieve substantial
19 completion. Would you agree with that?

20 **MR. RICHARD HOLDER:** Correct.

21 **MR. MICHAEL VALO:** And in fact, I'm going to pull it up but if we
22 go to -- I'll ask the document be brought up, ALS6702.

23 And while the court operator is kindly cueing that up, I'll just give
24 you the context, this is the substantial completion rejection letter from the independent
25 certifier, sir. In fact, you just looked at this with Commission counsel earlier this
26 morning.

27 And in particular, I'm interested in going to page 24, please, I'm
28 skipping over all the context because you did it earlier, but this is the basis -- what we're

1 looking at is the City's letter that is attached to the independent certifier's letter rejecting
2 substantial completion, RTG's application for substantial completion. Would you agree?

3 **MR. RICHARD HOLDER:** Correct.

4 **MR. MICHAEL VALO:** And what we're looking at here is an
5 enumerated list that the City prepared for the basis on which it rejected that application.
6 Would you agree?

7 **MR. RICHARD HOLDER:** Correct.

8 **MR. MICHAEL VALO:** And if you look in particular to the third
9 bullet on the screen here, sir, it addresses alarm management and it says:

10 "RTG had failed to demonstrate an effective
11 configuration of the SCADA alarms that will enable
12 the City to provide command and control in a safe and
13 efficient manner." (As read)

14 And then it says:

15 "Here's an example; on April 29, 2019, we had -- we
16 counted 1,760 alarms." (As read)

17 And so if I understand this correctly, what the City was saying to
18 RTG was the SCADA system is providing all of these alarms, but it's not configured
19 appropriately in a way that I can use the system. Is that right?

20 **MR. RICHARD HOLDER:** Correct.

21 **MR. MICHAEL VALO:** Okay. Would you agree, sir, that when the
22 City ultimately did accept RTG's application for substantial completion about a month or
23 six weeks later on July 31st, it did so even though no changes had been made to the
24 SCADA system in order to improve its functionality?

25 **MR. RICHARD HOLDER:** I believe that there had been significant
26 work undertaken on the process of prioritizing and managing alarms in that three-month
27 period.

28 **MR. MICHAEL VALO:** Three-month period, sir? It was six weeks

1 between substantial completion -- rejection and substantial completion acceptance. I
2 think it's May -- well, we can go to the date if we go to page 1, please, but you'd agree
3 that substantial completion was actually accepted July 31, right? Here it's May 13, it's
4 being rejected. Six weeks later -- or maybe it's more, but July 31, you'd agree its
5 accepted?

6 **MR. RICHARD HOLDER:** Yeah. It's two and a half ---

7 **MR. MICHAEL VALO:** Two and a half ---

8 **MR. RICHARD HOLDER:** --- it's two -- it's ---

9 **MR. MICHAEL VALO:** My math is off; two and a half?

10 **MR. RICHARD HOLDER:** --- two and a half months.

11 **MR. MICHAEL VALO:** Okay. You're familiar with Parsons, of
12 course; you explained their role to Commission counsel.

13 **MR. RICHARD HOLDER:** Correct.

14 **MR. MICHAEL VALO:** And one of the Parsons' consultants was a
15 Mr. Palmer and he -- one of the things he looked at was the SCADA issues and
16 operations issues, would you agree?

17 **MR. RICHARD HOLDER:** Yes.

18 **MR. MICHAEL VALO:** And you're aware Mr. Parsons was
19 interviewed by Commission counsel in this -- in this inquiry?

20 **MR. RICHARD HOLDER:** Yes.

21 **MR. MICHAEL VALO:** Were you aware that the SCADA
22 management system was one of the subsystems -- the specific subsystems identified
23 by Parsons as being immature and an obstruction to opening?

24 **MR. RICHARD HOLDER:** I'm not aware where he would have
25 identified that to me. It was -- he was not directly involved in the testing and
26 commissioning of the SCADA system. He was involved in providing an opinion on the
27 readiness of the operators and the controllers, but importantly, he was brought in to
28 draft documentation such as standard operating procedures, the concept of operations,

1 and other documents. He was involved in developing a SCADA alarm management
2 plan, along with Johnathan Hulse. It was clearly apparent it was required because of
3 the high number of alarms that were taking place and the lack of prioritization.

4 **MR. MICHAEL VALO:** Right. So do you disagree with Mr.
5 Palmer's evidence in this inquiry -- and I'll quote it for you, I'm not sure if you've had a
6 chance to read it but Mr. Palmer says:

7 "...and so the City were aware that the alarms were an issue and an obstruction to
8 opening if you'd like or you know something was potentially going to be not good in
9 service." (As read)

10 Do you disagree with Mr. Palmer's recollection of events prior to the
11 start of service?

12 **MR. RICHARD HOLDER:** I'm not sure at what time Mr. Palmer
13 arrived at that conclusion. There were -- during the several months leading up to
14 revenue service availability, there was lots of work being completed by RTG. There
15 were lots of improvements in the reliability of the system, and I would ask that his
16 opinion needs to be understood in terms of the time when he drew that conclusion.

17 **MR. MICHAEL VALO:** I'm -- I'll come to that because, I agree,
18 timing is critical here. Do you agree that Mr. Palmer suggested to you and to the City
19 that it was necessary -- or pardon me; it was necessary to prepare a short-term strategy
20 to address the alarm management issue?

21 **MR. RICHARD HOLDER:** Yes.

22 **MR. MICHAEL VALO:** And do you agree also that he advised you
23 that a long-term fix was required?

24 **MR. RICHARD HOLDER:** Yes.

25 **MR. MICHAEL VALO:** And according to Mr. Palmer, if the SCADA
26 alarms were not fixed it would be unfair to the operators and the maintainers. Do you
27 agree with that?

28 **MR. RICHARD HOLDER:** Yes.

1 **MR. MICHAEL VALO:** And the operator in this case, of course,
2 was OC Transpo?

3 **MR. RICHARD HOLDER:** Yes.

4 **MR. MICHAEL VALO:** And the maintainer was RTM and Alstom?

5 **MR. RICHARD HOLDER:** Correct.

6 **MR. MICHAEL VALO:** Okay. I'd like to pull up, if we could, another
7 document; it's PAR3446.

8 So what we're looking at, Mr. Holder, is an O-Train SCADA alarm
9 strategy plan. Do you recognize this document?

10 **--- EXHIBIT No. 124:**

11 PAR0003446 – O-Train SCADA Alarm Strategy Plan 10
12 September 2019

13 **MR. RICHARD HOLDER:** I'm familiar that a document was
14 created. I'm not sure if this is the specific one that went into the overall safety
15 management system.

16 **MR. MICHAEL VALO:** Can we scroll down just a little bit so we
17 can see the -- thank you.

18 So we see here the date is September 10, 2019. Do you see that?

19 **MR. RICHARD HOLDER:** Okay, yes.

20 **MR. MICHAEL VALO:** And you'd agree that that is a date that is
21 after revenue service availability is achieved?

22 **MR. RICHARD HOLDER:** Yes.

23 **MR. MICHAEL VALO:** And it's a date that is after, of course,
24 substantial completion is achieved?

25 **MR. RICHARD HOLDER:** Yes.

26 **MR. MICHAEL VALO:** Okay. And in fact, I suppose, this is right
27 before the system goes into passenger service, about four days before that, right?

28 **MR. RICHARD HOLDER:** Yes.

1 **MR. MICHAEL VALO:** Can we just scroll down a little further,
2 please?

3 And you can see here, sir -- I'm sorry; I'll just ask you to pause
4 there.

5 You can see here the author of the version is John Hulse. So this
6 is a document that was prepared by Parsons for the City. Do you agree with that?

7 **MR. RICHARD HOLDER:** Yes.

8 **MR. MICHAEL VALO:** This, in effect, was the short-term solution
9 that Mr. Parsons had proposed. Do you agree?

10 **MR. RICHARD HOLDER:** I'm not sure if it's both short-term and
11 long-term. I would have to go through the details within the document.

12 **MR. MICHAEL VALO:** Okay, well let's go to -- let's go to page 17,
13 please; and, in particular, I'm interested in going down a little -- the second half of the
14 page if we could, please?

15 Review of existing alarms. Here we see another 24-hour period
16 where all the alarms were aggregated, and the finding was that over this period there's
17 aggregated, and the finding was that over this period, there's 1,668 alarms captured.
18 So, still about the same order of magnitude as we saw, which made the basis for the
19 City's rejection of RTG's substantial completion application back in May. I think that
20 was about 1,700. Do you recall that?

21 **MR. RICHARD HOLDER:** Yes.

22 **MR. MICHAEL VALO:** Okay.

23 **MR. RICHARD HOLDER:** I don't know if there is a difference
24 between the priority levels. So, the priority level, half of almost -- well, half of these are
25 considered to be normal alarms, as opposed to the Priority 0 to Priority 3. I don't know
26 how that compares to the previous reported number of alarms.

27 **MR. MICHAEL VALO:** And that's a fair ---

28 **MR. RICHARD HOLDER:** So, the aggregate -- the disaggregation,

1 I think, is important.

2 **MR. MICHAEL VALO:** You're right, sir. It is important, and that's a
3 fair distinction, and I myself don't recall, but what I do know, and what we can all see
4 here, is that as far as Parsons was concerned, the number of high priority alarms in this
5 sample taken from August 19, 2019, during the trial run period was considered too high
6 to be manageable by a single SCADA position. Would you agree with that?

7 **MR. RICHARD HOLDER:** Well, that's their assertion in this
8 document, yes.

9 **MR. MICHAEL VALO:** Right. And, of course, they're the subject
10 matter expert that the City retained in order to evaluate the systems -- the operational
11 readiness of the system and the contractors.

12 **MR. RICHARD HOLDER:** Correct.

13 **MR. MICHAEL VALO:** Right. So, if we could just scroll down a
14 little further, please, down to page 18, and I want to look just below this chart if we
15 could, please. And the chart, of course, looks at the sampling of the Priority 0, which is
16 the highest priority, sir, Priority 0 alarms?

17 **MR. RICHARD HOLDER:** Correct.

18 **MR. MICHAEL VALO:** And the conclusion that Parsons indicates
19 here in the report is that,

20 "It is not clear that any of these alarms would be useful for
21 day-to-day operations. Many of these alarms are due to the
22 fact that specific systems are not fully commissioned and are
23 not representative of the expected behaviour during normal
24 revenue service."

25 So, certainly, you would have to agree, sir, that at least at this time,
26 the SCADA alarm management issues, which had previously been identified by the City
27 in its first rejection of substantial completion, do not appear to have been resolved by
28 August.

1 **MR. RICHARD HOLDER:** I would have to look at the data to see
2 the difference between the original substantial completion where we raised it as an
3 issue, and the numbers as of this date. But it would appear that there were still issues
4 with the alarm management.

5 **MR. MICHAEL VALO:** Right. Certainly ---

6 **MR. RICHARD HOLDER:** I would agree.

7 **MR. MICHAEL VALO:** --- whatever the -- however the data breaks
8 out, it was Parsons' view, as the subject matter expert, that it was not yet sufficient and
9 it reflected an uncommissioned system.

10 **MR. RICHARD HOLDER:** That's what they're stating here, yes.

11 **MR. MICHAEL VALO:** Now, would you agree, sir, that priority
12 alarms require a response or action by either operator or maintainer, or potentially both?

13 **MR. RICHARD HOLDER:** Yes.

14 **MR. MICHAEL VALO:** And, of course, if your operators and
15 maintainers are inundated with false or erroneous priority alarms, that could be a major
16 distraction or create additional work for them?

17 **MR. RICHARD HOLDER:** Correct.

18 **MR. MICHAEL VALO:** And I'd take it that you would also agree
19 that if your operators and maintainers are inundated with false or erroneous SCADA
20 alarms, there might be a detrimental impact to the reliability of the system.

21 **MR. RICHARD HOLDER:** Some of the alarms would potentially
22 have impact to the reliability of the system.

23 **MR. MICHAEL VALO:** Right. And if ---

24 **MR. RICHARD HOLDER:** But many of the alarms are just
25 providing an indication of an issue that is occurring and are not related to reliability.

26 **MR. MICHAEL VALO:** Quite right, but what we heard from Mr.
27 Palmer yesterday is that if those handful of truly important alarms are lost in a sea of
28 irrelevant ones, that could have major ramifications to the system.

1 **MR. RICHARD HOLDER:** Yes. And that's why he -- that's why the
2 team was hired to work on the alarm management system with the TOCC staff.

3 **MR. MICHAEL VALO:** Exactly right. And yet, we see that it's only
4 by September 10 that Parsons has produced their short-term solution. RSA has already
5 been achieved. Would you agree?

6 **MR. RICHARD HOLDER:** I see that the draft document was begun
7 in August. So, this issue was being addressed during trial running. In terms of a final
8 documentation, if the final documentation didn't occur until revenue service, that's one
9 issue, but the work was being undertaken by the Parsons team and by the TOCC.

10 **MR. MICHAEL VALO:** We know at least by trial running there was
11 still, as far as Parsons was concerned, I think it was August 19, too many alarms to be
12 useful. That was Parsons' view.

13 **MR. RICHARD HOLDER:** That's what they're indicating here.

14 **MR. MICHAEL VALO:** Are you aware, sir, whether OLRTC or its
15 subcontractor Willowglen ever implemented a long-term permanent fix to the SCADA
16 system?

17 **MR. RICHARD HOLDER:** I would have to check that.

18 **MR. MICHAEL VALO:** I'd like to ---

19 **MR. RICHARD HOLDER:** I know it's under discussion.

20 **MR. MICHAEL VALO:** I'd like to just open a document that will
21 maybe perhaps not answer the question, but certainly help provide a little further
22 context, and that is RTG 00011288.

23 And while that's queuing up, I'll set the context. Oh, here it is.
24 Terrific. Thank you.

25 This is a letter, sir, as you will see, from OLRTC addressed to
26 Rideau Transit Maintenance (RTM) and it's dated 9 November 2021. Do you see that?

27 **--- EXHIBIT No. 125**

28 RTG00011288 – Letter RTG and OLRTC to Rideau Transit

1 Maintenance 9 November 2021

2 **MR. RICHARD HOLDER:** Yes.

3 **MR. MICHAEL VALO:** So, that's more than two years after
4 passenger service has started. Would you agree?

5 **MR. RICHARD HOLDER:** Yes.

6 **MR. MICHAEL VALO:** All right. Now, if we could just scroll down a
7 little bit. I think the first paragraph will do. There we are. What we can see OLRTC is
8 writing to RTM about is alarm management. That's the subject line, but the reference is
9 outstanding issue item P9. And what OLRTC says is,

10 "As part of OLRTC outstanding issues list, item P9 related to
11 alarm management was identified. It is OLRTC's
12 understanding the problem lies in the sheer quantity of
13 alarms being generated and reported by the SCADA system,
14 and, as such, there are too many coming through to the
15 TOCC for operation to effectively manage."

16 Would you agree, sir, this sounds just like the problem identified by
17 Parsons prior to revenue service?

18 **MR. RICHARD HOLDER:** It is indicating that there is still an issue
19 with alarm management, yes.

20 **MR. MICHAEL VALO:** Right. So, the alarm management issue in
21 issue based on which, at least in part, you rejected RTG's first application for substantial
22 completion. More than two years after revenue service, we see still it does not appear
23 to have been resolved or even to have started to be resolved by OLRTC. Would you
24 agree with that?

25 **MR. RICHARD HOLDER:** I would agree that the City is very
26 disappointed in RTG's ability to deal with issues that impact our TOCC.

27 **MR. MICHAEL VALO:** So, then, you were aware that this issue
28 hadn't been resolved?

1 **MR. RICHARD HOLDER:** I'm aware that there are several issues
2 that RTG is still working on to satisfy the minor deficiency list. I was not specifically
3 aware that the alarm management system still required significant upgrades.

4 **MR. MICHAEL VALO:** Are you telling us the alarm management
5 issues are on the minor deficiency list?

6 **MR. RICHARD HOLDER:** I'm not aware. I would have to check
7 the minor deficiency list.

8 **MR. MICHAEL VALO:** At least as of May, they were considered
9 not to be minor, and that's why they were identified as a basis for rejecting substantial
10 completion in the first instance.

11 Let's turn to another subject if we could, sir, and that pertains to
12 RTM's maintenance plans in terms of getting ready for revenue service. You would
13 agree -- I think your evidence to Commission counsel was that one of your
14 responsibilities leading up to revenue service and evaluating the maintenance team's
15 readiness was reviewing their paperwork to confirm the maintenance team had the
16 plans in place in order to begin to execute its work. Do you recall that?

17 **MR. RICHARD HOLDER:** Right.

18 **MR. MICHAEL VALO:** And one of -- and I think you indicated one
19 of the documents you reviewed was the maintenance and rehabilitation plans, or the
20 suite of documents where the maintenance and rehabilitation plans that were submitted
21 in the lead up to trial run, correct?

22 **MR. RICHARD HOLDER:** Correct.

23 **MR. MICHAEL VALO:** And your view, at the time, based on your
24 team's review of RTM and Alstom's maintenance documents, was that the maintenance
25 team was ready for revenue service, right?

26 **MR. RICHARD HOLDER:** Correct.

27 **MR. MICHAEL VALO:** I want to look, if we could, at a document,
28 the asset management plan, sir, and that is ALS12324.

1 **--- EXHIBIT No. 126:**

2 ALS0012324 – Asset Management Plan Alstom Ottawa LRT
3 Maintenance 15 February 2019

4 **MR. MICHAEL VALO:** So we can see here, this is Alstom’s Asset
5 Management Plan, Version “B”. Can we scroll down a little to see the date, please?
6 There you have it, it’s February – just in the bottom right there. It’s February 15th, 2019.

7 I presume, Mr. Holder, this was one of the kinds of documents, and
8 certainly – probably one of these documents you or someone on your team would have
9 reviewed as part of your review for maintenance readiness?

10 **MR. RICHARD HOLDER:** That was – one of the roles for Tom
11 Fodor, was to review the documentation that was being submitted to the City through
12 the Schedule 10 submission process.

13 **MR. MICHAEL VALO:** And, of course, Tom reported to you and
14 you relied on Tom and that’s how you determined whether or not to pass – for the
15 maintenance team to say “yes, the maintenance is ready; we’re ready to enter revenue
16 service”; is that right?

17 **MR. RICHARD HOLDER:** That’s right.

18 **MR. MICHAEL VALO:** Can we turn to page three, please? Now if
19 you just scroll a little lower on this page, it sets out the purpose and the scope and
20 there’s – in this big red box here there’s this disclaimer. And the disclaimer says:

21 “Alstom has yet to receive all the approved versions of the asset
22 register, operation and maintenance manuals, configuration
23 management plan as built drawings and all other documents as per
24 contract to establish a baseline for the maintenance activities.
25 Therefore, this document is based on the agreement and what’s
26 known at the time.”

27 Do you see that there, sir?

28 **MR. RICHARD HOLDER:** I do see that, yes, from the document in

1 February.

2 **MR. MICHAEL VALO:** Right. And I take it you'd agree that the
3 asset register, operations and maintenance manuals, original equipment manufacturer
4 manuals and procedures, as-built drawings, all those documents would be necessary
5 for your maintainer to prepare its plans to service the system; would you agree?

6 **MR. RICHARD HOLDER:** I would agree and I believe that that is
7 the response that we provided when we were reviewing the RTM's maintenance and
8 rehabilitation plan around that time, that there was significant deficiencies and that the
9 RTM – this is Alstom's maintenance plan – that RTM, as the body with the responsibility
10 for all the maintenance, their maintenance and rehabilitation plan was lacking a number
11 of documents, and we indicated that.

12 **MR. MICHAEL VALO:** Right. And those documents, they were
13 lacking and were necessary to prepare project specific maintenance and asset
14 management plans?

15 **MR. RICHARD HOLDER:** Correct.

16 **MR. MICHAEL VALO:** And it sounds like you did flag this for RTM
17 at the time; right?

18 **MR. RICHARD HOLDER:** We did.

19 **MR. MICHAEL VALO:** Right. It was a concern of yours?

20 **MR. RICHARD HOLDER:** Yes.

21 **MR. MICHAEL VALO:** Not sufficient to stop RSA from occurring,
22 but sufficient that it was just flagged?

23 **MR. RICHARD HOLDER:** This is from February, so we provided
24 that feedback to RTM in February, which was several months before substantial
25 completion. So it was one of the items that we were tracking that required to be
26 completed the provision of the sufficient documentation so that we could get to
27 substantial completion.

28 **MR. MICHAEL VALO:** Right.

1 And you'd agree that the types of documents and information we're
2 talking about now, that would be necessary to feed into these plans, those would come
3 from OLRTC as the design builder?

4 **MR. RICHARD HOLDER:** Correct.

5 **MR. MICHAEL VALO:** Right. And do you know as we sit here
6 today, when those documents were provided to RTM?

7 **MR. RICHARD HOLDER:** I'm not sure exactly. I know the
8 documents were provided such that the final version of the maintenance and
9 rehabilitation plan was accepted by the City. So in some period between February and
10 substantial completion.

11 **MR. MICHAEL VALO:** Right. So do you know who Claude
12 Jacobs was, sir?

13 **MR. RICHARD HOLDER:** Who? Sorry.

14 **MR. MICHAEL VALO:** Claude Jacobs.

15 **MR. RICHARD HOLDER:** I do know Claude Jacobs, I know who
16 he was; he was the Director of RTM.

17 **MR. MICHAEL VALO:** The Director of RTM prior to and following
18 revenue service availability; so in this time period we're talking about?

19 **MR. RICHARD HOLDER:** Correct.

20 **MR. MICHAEL VALO:** Were you aware, sir, that Mr. Jacobs'
21 evidence to this Commission was that RTM did not receive these documents until
22 batches started to come in from OLRTC between June and sometime in August?

23 **MR. RICHARD HOLDER:** I was not aware that he had given that
24 evidence, no.

25 **MR. MICHAEL VALO:** And now having heard that evidence, and
26 for the record, that's at page 16 of Mr. Jacobs' transcript. I don't think it's necessary to
27 go there now. But now hearing Mr. Jacobs' evidence, hearing that this information
28 wasn't actually delivered to RTM until as late as August, was that sufficient time in your

1 view to prepare the necessary project-specific maintenance plans in order to start this
2 system?

3 **MR. RICHARD HOLDER:** Well, I would believe that Alstom, being
4 heavily engaged in the project from the very beginning, and having agreed to the terms
5 of the maintenance contract with RTG and RTM, and agreed with the scope of work that
6 Alstom would be undertaking for RTM, that they would have a very clear understanding
7 of the type of maintenance activities that needed to occur. I do not disagree that the
8 documentation came in late but Alstom, as a supplier of maintenance services across
9 the world, was considered to be a very well-informed contractor that would have a very
10 good idea of the type of services that would be required and that it was going to bill
11 RTM for.

12 **MR. MICHAEL VALO:** Sure. And that would allow Alstom to
13 prepare a document like the one on the screen, in a generic form, but of course the
14 evidence we've heard in this inquiry, is that nothing for this project came off the shelf,
15 did it, that was built and designed for this project. Would you agree with that?

16 **MR. RICHARD HOLDER:** No. There were many off the shelf
17 items that were included in this project.

18 **MR. MICHAEL VALO:** Can we pull up document ALS56183,
19 please?

20 **--- EXHIBIT No. 127:**

21 ALS0056183 – Letter Alstom to RTG 1 November 2018

22 **MR. MICHAEL VALO:** This is a letter, sir, from Alstom
23 Maintenance to RTM of November 1, 2018, so some time earlier – in fact, I think this is
24 when revenue service was still anticipated to commence or be achieved revenue
25 service availability in November of 2018. Do you recall that?

26 **MR. RICHARD HOLDER:** I don't recall this letter, but I certainly
27 recall that there was an intent to have revenue service availability, or at least it was
28 stated by RTG that revenue service availability would be achieved at the end of 2018. It

1 was not the City's position that that was ever likely but that was RTG's assertion.

2 **MR. MICHAEL VALO:** Let's scroll down just a little bit. I don't
3 quibble with the fact that you haven't seen this letter necessarily, but if you look in the
4 first paragraph you'll see what Alstom – Mr. Bobek says is – the letter is being written
5 with respect to readiness for revenue service by November 10 with the expectation that
6 30 November RSAD will be achieved. So it's still currently the plan as the project is
7 concerned, to achieve revenue service by this date, by November, you'd agree?
8 November 30th?

9 **MR. RICHARD HOLDER:** That's what's stated, yes.

10 **MR. MICHAEL VALO:** In the 4th paragraph there it starts "In
11 addition", Alstom writes to RTM:

12 "Although it may be possible to begin revenue service readiness,
13 there are several risks created by incomplete documentation,
14 training, spares, et cetera from OLRTC that need to be mitigated to
15 successfully execute the maintenance of the system and ensure
16 contractual levels of performance."

17 So I think this goes to your point, Mr. Holder, Alstom is a world-wide
18 expert; they can certainly prepare and possibly even start revenue service, but there are
19 risks if they don't have the necessary information; do you agree with what Mr. Bobek is
20 saying here?

21 **MR. RICHARD HOLDER:** I agree. There were many, many items
22 that were no where near ready for revenue service in November, documentation being
23 one piece, the other piece being the Alstom vehicles. There were many components of
24 the system that were not functioning.

25 **MR. MICHAEL VALO:** Right. And the focus today of course, or
26 right now in this moment, is just maintenance readiness because you have -- we were
27 talking earlier about Mr. Fodor at Parsons, the consultants you brought in to evaluate
28 the readiness of maintenance team to enter revenue service. That was one of your

1 teams' functions, right Mr. Holder?

2 **MR. RICHARD HOLDER:** Correct.

3 **MR. MICHAEL VALO:** And so your team would, of course, be
4 concerned if the necessary information required by your maintenance team to perform
5 their duties wasn't being provided, right?

6 **MR. RICHARD HOLDER:** Yes, but there was an expectation,
7 given RTM's declaration that they would be ready for November, and Alstom being a
8 major component of RTM that the detailed planning for the type of maintenance
9 activities that were going to occur would have been well in towards the end of 2018.

10 **MR. MICHAEL VALO:** I ---

11 **MR. RICHARD HOLDER:** It was RTG that was declaring to the
12 City that RTG would be ready, of which Alstom was a key player.

13 **MR. MICHAEL VALO:** Well ---

14 **MR. RICHARD HOLDER:** And so it is surprising to be presented
15 this information now to understand that despite declaring that RTG would be ready in
16 November of 2018, there was -- there was no understanding of the requirement of the
17 maintenance activities that Alstom was going to provide, and I am surprised.

18 **MR. MICHAEL VALO:** I want to turn next to testing and
19 commissioning, that was another one of your remits or mandates as part of your team,
20 right?

21 **MR. RICHARD HOLDER:** Yes.

22 **MR. MICHAEL VALO:** Can we put up a new document, please?
23 It's COW3617.

24 And what we're going to cue up here, sir, is OLRTC's testing and
25 commissioning plan.

26 If we can scroll down, we can just identify the document. Are you
27 familiar with this plan, sir?

28 **--- EXHIBIT No. 128:**

1 COW0003617 – OLRT Project Testing & Commissioning
2 Plan 4 December 2015

3 **MR. RICHARD HOLDER:** I am aware of its existence.

4 **MR. MICHAEL VALO:** Well, surely in your role you'd be more than
5 just aware of its existence. You'd have reviewed this at the time of the project, right?

6 **MR. RICHARD HOLDER:** It's correct, yes.

7 **MR. MICHAEL VALO:** Right.

8 **MR. RICHARD HOLDER:** I would need to be reminded of the
9 content, but I was aware at the time.

10 **MR. MICHAEL VALO:** Yeah, of course, yeah. I -- there's no
11 memory test, sir, I just want to make sure this was the document you and your team
12 would have looked to and relied on as part of your evaluation of whether the testing and
13 commissioning process and progress of OLRTC was being -- was being met, right?

14 **MR. RICHARD HOLDER:** Yeah, and it was very much a high-level
15 document provided in 2015, several years before testing and commissioning actually
16 began.

17 **MR. MICHAEL VALO:** Right, it represents the -- it represents the
18 plan of what everyone thought testing and commissioning ought to have been, ---

19 **MR. RICHARD HOLDER:** Correct.

20 **MR. MICHAEL VALO:** --- in order to complete the project?

21 **MR. RICHARD HOLDER:** Correct.

22 **MR. MICHAEL VALO:** Right. So could we please go to page 43?
23 And if we just scroll down a little bit, we can see there's a table here that splits T&C, or
24 testing and commissioning, into three phases, do you see that, sir?

25 **MR. RICHARD HOLDER:** I do.

26 **MR. MICHAEL VALO:** Right, and if you add Phase 1 is 21 weeks,
27 and that's just the test track, and we know that was just a portion of track between --
28 well, on the east end of the -- the east end of the track, you'd agree with that?

1 **MR. RICHARD HOLDER:** Correct.

2 **MR. MICHAEL VALO:** It was about four kilometres of track, is that
3 right?

4 **MR. RICHARD HOLDER:** Yes.

5 **MR. MICHAEL VALO:** And then there's a mid-stage, that's Phase
6 2, and it's supposed to be 39 weeks, so the better part of a year, and that's to include
7 the tunnel section, for example, and all aggregated sections from UOttawa to Blair. Do
8 you see that?

9 **MR. RICHARD HOLDER:** Yes.

10 **MR. MICHAEL VALO:** And Phase 3 is the full track, and that's 25
11 weeks of testing with the full track?

12 **MR. RICHARD HOLDER:** Yes.

13 **MR. MICHAEL VALO:** And that represents the original plan.

14 Now if we scroll down a little -- if we scroll to the next page, please?
15 We can see Phase 2 and Phase 3. Phase 2 is intended to use the alignment through
16 the tunnel to test if -- I'm just at the bottom of the paragraph -- multiple trains under
17 CVTC operation. Full dynamic testing; do you see that?

18 **MR. RICHARD HOLDER:** Under 4.7.2? Yes.

19 **MR. MICHAEL VALO:** Right. And so that was intended to start, if I
20 add these together, that should have started more than a full year before revenue
21 service availability, would you agree, based on the number of weeks?

22 **MR. RICHARD HOLDER:** Yes.

23 **MR. MICHAEL VALO:** And then if we scroll down a little further,
24 please, this is a graphical representation of the phases of testing and commissioning.
25 Have I got that right?

26 **MR. RICHARD HOLDER:** Its one interpretation of the phasing of
27 testing and commissioning. It's a little different to what was conceived at the very outset
28 of the project but at the time this was accurate, yes.

1 **MR. MICHAEL VALO:** Are -- was this testing and commissioning
2 plan updated, sir?

3 **MR. RICHARD HOLDER:** The details of the phasing of the testing
4 and commissioning, in terms of working through Zones from 4 to 1, is different in this
5 plan as compared to what was provided at the beginning of the project.

6 **MR. MICHAEL VALO:** Right, it is -- this is the more up-to-date
7 version?

8 **MR. RICHARD HOLDER:** Correct.

9 **MR. MICHAEL VALO:** From 2015 as to what the plan was to be?

10 **MR. RICHARD HOLDER:** Yes.

11 **MR. MICHAEL VALO:** Right, and if we look in the box -- I know it's
12 a little small so hopefully you can see that, but I will read it. Phase 2, the mid-stage we
13 just talked about, it is to verify wayside and trackside integration. It's to cover 10
14 stations, integration of 10 stations -- and I thought this was interesting -- "simulated trial
15 running with OCT drivers"; do you see that?

16 **MR. RICHARD HOLDER:** Yeah.

17 **MR. MICHAEL VALO:** So the original plan was for simulated trial
18 running to have occurred almost a year prior to RSA or at least start at that point, right?

19 **MR. RICHARD HOLDER:** Yes.

20 **MR. MICHAEL VALO:** And simulated trial running would include
21 things like multiple units?

22 **MR. RICHARD HOLDER:** Yes.

23 **MR. MICHAEL VALO:** And it would -- multiple, multiple units?

24 **MR. RICHARD HOLDER:** Yes.

25 **MR. MICHAEL VALO:** Is that correct? Okay. And then, of course,
26 the third phase, which was to be 35 weeks, on the full track, headway confirmation,
27 emergency drills and scenarios, systemwide integration testing.

28 So that's a significant amount of time dedicated to things like

1 emergency drills and scenarios, would you agree with that?

2 **MR. RICHARD HOLDER:** Correct.

3 **MR. MICHAEL VALO:** And presumably a continuation of simulated
4 trial running?

5 **MR. RICHARD HOLDER:** Correct.

6 **MR. MICHAEL VALO:** Now are you aware, sir, that the City didn't
7 actually start running multiple, multiple units -- I think we saw yesterday in Mr. Palmer's
8 examination, or the Parsons group, that OC Transpo had achieved five multiple units
9 only in May or June of 2019?

10 **MR. RICHARD HOLDER:** I heard that testimony and I believe it's
11 incorrect, and I believe that the testimony provided by Bertrand is incorrect, because I
12 believe that there was, as part of the Thales increase in maturity level with their testing,
13 that there was a test track available in the east end and there were between nine and
14 11 vehicles running in a loop and Thales provided safety certification for the City to
15 undertake that loop activity including nine, to ten, to eleven vehicles, at least in
16 November 2018 is what I understand.

17 So the -- so as part of the Thales work, their ability to test their
18 systems they needed to run multiple vehicles. That also coincided with the increase in
19 on-the-job training that was available for our drivers as part of their preparedness for
20 revenue service.

21 **MR. MICHAEL VALO:** Okay. I'm going to see if I can bring just
22 some facts here instead of just operating on memory.

23 Could I ask the court operator, please, to open COW114?

24 Are you familiar with this document, sir?

25 **--- EXHIBIT No. 129:**

26 COW0000114 – O-Train Confederation Line Project Update

27 2 April 2019

28 **MR. RICHARD HOLDER:** Yes.

1 **MR. MICHAEL VALO:** This is a FEDCO presentation, it would
2 have been given to, I guess, City Council ---

3 **MR. RICHARD HOLDER:** Yes.

4 **MR. MICHAEL VALO:** --- by -- is it your team or Mr. Manconi?

5 **MR. RICHARD HOLDER:** I believe it would have been given by
6 our team by either Michael Morgan or John Manconi.

7 **MR. MICHAEL VALO:** Right. And the date here is April 2, 2019?
8 And if I could -- if I could ask for page 18 or slide 18 to be pulled up,
9 please?

10 So here we are practice plan running, first bullet:

11 “Using the entire fleet of 34 vehicles, various system
12 testing, and commissioning of trains and train
13 configurations have been used.” (As read)

14 So status, that's the current status; that's our second bullet.

15 “Seventeen (17) single and two couple vehicles were
16 running between Tunney's Pasture and Blair the week
17 of March 11. And that was increased to 20 trains the
18 week of March 18.” (As read)

19 But what we see in the bullet below is that we're only -- it's -- that
20 20 refers to individual vehicles on the system, and that was a major milestone. Do you
21 see that, sir?

22 **MR. RICHARD HOLDER:** Yes.

23 **MR. MICHAEL VALO:** So we're not -- we're not at a full
24 complement of multiple units yet, are we?

25 **MR. RICHARD HOLDER:** No, but we have been running multiple
26 vehicles, not in a two-car consist, but we have been running multiple vehicles in a loop
27 from the fall of 2018.

28 **MR. MICHAEL VALO:** Right. But that's not simulated service.

1 That's not the full capacity trial running -- or I shouldn't say trial running, but the testing
2 and commission that was contemplated by OLRTC in 2015. That's something much
3 less?

4 **MR. RICHARD HOLDER:** I would agree.

5 **MR. MICHAEL VALO:** Right. And in fact, it wasn't fact until -- I --
6 we can -- we can go to the next of these FEDCOs.

7 Can you scroll down, please, actually? Maybe it indicates it in this
8 one.

9 We're -- the third-last bullet is:

10 "We're transitioning the week of March 25 towards 15
11 double car trains on the system." (As read)

12 That's what's planned. So we're not there yet. We know based on
13 this that we haven't yet achieved the 15 multi units anticipated by revenue service.

14 Would you agree with that?

15 **MR. RICHARD HOLDER:** I would agree, and I think it contradicts
16 testimony that has been provided by other people at Alstom.

17 **MR. MICHAEL VALO:** Okay.

18 **MR. RICHARD HOLDER:** Because it's clear from this that in the
19 spring of 2019 that there were multiple vehicles running on a regular basis on the track.

20 **MR. MICHAEL VALO:** Perhaps on a section of track, but not the
21 full ---

22 **MR. RICHARD HOLDER:** Well, this is ---

23 **MR. MICHAEL VALO:** --- complement that's contemplated by the
24 testing.

25 **MR. RICHARD HOLDER:** But from Tunney's Pasture to Blair
26 Station, it's -- it is a significant portion of the track, including the tunnel.

27 **MR. MICHAEL VALO:** Okay.

28 **MR. RICHARD HOLDER:** It's the whole track.

1 **MR. MICHAEL VALO:** Right. So I ---

2 **MR. RICHARD HOLDER:** It's end to end.

3 **MR. MICHAEL VALO:** I'm just trying to understand; is your
4 evidence that this slide deck delivered to the City is not an accurate portrayal of the
5 milestones of vehicle operation?

6 **MR. RICHARD HOLDER:** I'm not asserting that at all.

7 **MR. MICHAEL VALO:** Right. So you'd agree that this -- what is
8 being communicated to the City and what the superiors indicate to us is that at the time,
9 which is April 2, as of April 2, 20 individual vehicles have been operated on the system
10 as of March 14 and that was considered a major milestone, but we haven't yet got to a
11 full complement of multiple units.

12 **MR. RICHARD HOLDER:** I agree.

13 **MR. MICHAEL VALO:** Okay.

14 **MR. RICHARD HOLDER:** I'm just making the point, because I
15 think it's important for public information, but some of the testimony that I have heard
16 indicates that there was only one or two trains running during this period. And so I'm
17 just pointing that out to the Commission, that there is some testimony that is
18 contradicted by information such as this.

19 **MR. MICHAEL VALO:** Okay. I want to look at a final document,
20 I'm hopeful. It is COW116. And this is, sir, another FEDCO presentation. And if you
21 scroll down just a little bit, we'll see the date. It's from June 4, 2019. So we're fast
22 forwarding in time two months, because we were just in April. And if we could go to
23 page 10, please, "Next steps on substantial completion."

24 So this is in anticipation. We haven't reached substantial
25 completion yet, would you agree? We're in June and substantial completion was
26 achieved at the end of July?

27 **--- EXHIBIT No. 130:**

28 COW0000116 - O-Train Confederation Line Project

1 Update 4 June 2019

2 **MR. RICHARD HOLDER:** Correct. Right.

3 **MR. MICHAEL VALO:** So what your team is communicating to the
4 City is that following substantial completion, we need to have a successful trial run and
5 independent safety auditor sign off, you agree?

6 **MR. RICHARD HOLDER:** Correct.

7 **MR. MICHAEL VALO:** And RSA needs to be achieved and that
8 would follow the trial run?

9 **MR. RICHARD HOLDER:** Correct.

10 **MR. MICHAEL VALO:** And then the City anticipated moving up to
11 four weeks before it launched. And this goes back to some questions Commission
12 counsel was asking you about, and that is that RSA was a contractual milestone, but
13 when the City chose to enter passenger service, it was entirely within the City's remit,
14 isn't that right?

15 **MR. RICHARD HOLDER:** It was. The expectation was, though,
16 that revenue service availability directly preceded passenger service. That was how the
17 contract was written.

18 **MR. MICHAEL VALO:** I don't know that I've seen passenger
19 service written into the contract, and it's not important for my purposes. You'd agree
20 that as of June of 2019, the City's expectation was that it would need about four weeks
21 of further practice after RSA, or for whatever reason they needed, but four weeks before
22 they entered actual passenger service, you'd agree with that?

23 **MR. RICHARD HOLDER:** Well, I agree with what's in front of me
24 here, yes.

25 **MR. MICHAEL VALO:** Right. And in fact, as we know, revenue
26 service availability was achieved on August 30th or 31st, is that right?

27 **MR. RICHARD HOLDER:** Correct.

28 **MR. MICHAEL VALO:** And the system went into passenger

1 service only two weeks later?

2 **MR. RICHARD HOLDER:** Correct.

3 **MR. MICHAEL VALO:** And that cuts in half the City's anticipated
4 need, would you agree with that?

5 **MR. RICHARD HOLDER:** Well, that's a characterization. I believe
6 that there was a strategy from the City that needed to deal with the fact that the
7 completion of trial running, the exact date of trial running completion was unknown. We
8 did not know how long that was going to take, but it was necessary to pick a day when
9 the bus service would end and the light running -- light rail system would begin. So
10 there was a significant cutover that was going to occur.

11 And so there was a desire to have certainty about the date when
12 passengers start despite the fact that the end of trial running was uncertain. So there
13 was this -- an allowance was provided. In this case it's describing an allowance of four
14 weeks between -- as a conservative period between an uncertain trial running date
15 completion and the start of passenger service.

16 **MR. MICHAEL VALO:** So ---

17 **COMMISSIONER HOURIGAN:** Counsel? Counsel, you're well
18 over time, so I'll give you another minute or two to wrap up.

19 **MR. MICHAEL VALO:** Okay. Mr. Commissioner, those are all my
20 questions. Thank you very much.

21 **COMMISSIONER HOURIGAN:** All right. Very good.

22 Next is ---

23 **MR. MICHAEL VALO:** Thank you, Mr. Holder.

24 **COMMISSIONER HOURIGAN:** Next is Infrastructure Ontario.

25 **MR. SOLOMON MCKENZIE:** Good morning. My name is
26 Solomon McKenzie, M-c-K-e-n-z-i-e, Counsel for Infrastructure Ontario.

27 We have no questions for Mr. Holder.

28 **COMMISSIONER HOURIGAN:** All right, thank you.

1 Next is STV.

2 **MR. MICHAEL O'BRIEN:** Good afternoon, Mr. Commissioner.
3 Michael O'Brien for STV.

4 **--- CROSS-EXAMINATION BY MR. MICHAEL O'BRIEN:**

5 **MR. MICHAEL O'BRIEN:** Mr. Holder, I'm going to ask you a
6 question about document number COW0270758. This is a document that you looked at
7 in your examination with Commission counsel. This is the validation of trial running
8 acceptance document. If we can turn to page 3, please?

9 Specifically, there was a sentence you were asked about in this
10 document at the top of paragraph 2 that says:

11 "As peak service performance was achieved over
12 several days, the TRRT agreed to reduce the peak
13 service fleet size to 13 from 15 trains..." (As read)

14 And then the sentence goes on to say:

15 "To accommodate a revised service plan as agreed to
16 by the parties." (As read)

17 What is the "Revised service plan" that this sentence refers to?

18 **MR. RICHARD HOLDER:** When you decrease the number of
19 trains on the system, it's going to have an impact on the headways. So the service plan
20 would lay out the expected arrival and departure times of the trains for each of the
21 stations. So to make a change from 15 to 13 required a change to that service plan.

22 And then there was also associated changes to the bookings of
23 operators, for instance. So it was not just a simple matter of reducing the number of
24 trains. There were -- there were consequences on headway and the management of
25 operators.

26 **MR. MICHAEL O'BRIEN:** And it says it was agreed to by the
27 parties. Which parties agreed to this?

28 **MR. RICHARD HOLDER:** RTG and the City. There are only two

1 parties.

2 **MR. MICHAEL O'BRIEN:** That's the only question I have for this
3 witness, Mr. Commissioner. Thank you, Mr. Holder.

4 **COMMISSIONER HOURIGAN:** All right. Thank you. Next is
5 Thales.

6 **MS. MARIA BRAKER:** Hello, Maria Braker for Thales. We have
7 no questions for this witness.

8 **COMMISSIONER HOURIGAN:** All right. Thank you. Next is
9 Union Local 279, IAW.

10 **MR. JOHN McLUCKIE:** Good morning, Mr. Commissioner. Thank
11 you.

12 **COMMISSIONER HOURIGAN:** Sorry, I apologize. ATU Local
13 279.

14 **--- CROSS-EXAMINATION BY MR. JOHN McLUCKIE:**

15 **MR. JOHN McLUCKIE:** Mr. Holder, I'm counsel for ATU 279. As
16 I'm sure you're aware, we're the union representing the maintenance staff at OC
17 Transpo and at Alstom? You're aware of that?

18 **MR. RICHARD HOLDER:** I am.

19 **MR. JOHN McLUCKIE:** I just want to cover a few things
20 addressed by my friends this morning and then ask a few additional questions, if I can.
21 So, in July of 2019, the City, and Alstom, and RTG, and RTM were engaged in running
22 the train on the track and establishing its level of reliability. Would you agree with that?

23 **MR. RICHARD HOLDER:** Yes.

24 **MR. JOHN McLUCKIE:** And that period of time in July of 2019,
25 you heard evidence yesterday from Mr. Fodor, for example, that there were significant
26 issues being raised about the reliability of the train during that period. Would you agree
27 with that?

28 **MR. RICHARD HOLDER:** I would agree that Tom Fodor raised

1 those issues.

2 **MR. JOHN McLUCKIE:** And even this morning, in your interview
3 with Commission counsel when you testified this morning, she took you to a variety of
4 documents indicating that all of the train sets over the course of July of 2019 were
5 identifying faults with the trains, correct?

6 **MR. RICHARD HOLDER:** In general terms, that's correct. We
7 also had other information that was available to us at that time, as well as those kinds of
8 general observations. We had the actual data from Alstom on the reliability based on
9 components of the vehicle, and Alstom's data that was provided indicated that the
10 reliability of the trains was increasing substantially in that period of July and August.

11 **MR. JOHN McLUCKIE:** In July of 2019, just to be fairly specific
12 with the question, Mr. Holder, the trial that you were running, so where you were
13 actually running the trains up and down the track, was demonstrating there were
14 significant problems with the reliability of the Alstom train set, correct?

15 **MR. RICHARD HOLDER:** There were issues with the reliability,
16 yes.

17 **MR. JOHN McLUCKIE:** And the responsibility of Alstom under the
18 contract it had with RTG and RTM was they were responsible for the maintenance of
19 those trains, correct?

20 **MR. RICHARD HOLDER:** Correct.

21 **MR. JOHN McLUCKIE:** And the staff were ultimately employed by
22 Alstom that were responsible for fixing the defects in those trains, correct?

23 **MR. RICHARD HOLDER:** Correct.

24 **MR. JOHN McLUCKIE:** And the City retained Mr. Fodor and his
25 group from Parsons as independent consultants to come in and provide a picture to the
26 City of how the train was coming closer to operational functionality. Would you agree
27 with that?

28 **MR. RICHARD HOLDER:** He was hired to provide an opinion on

1 not just the vehicle but the whole system, the overall readiness for that maintenance.

2 **MR. JOHN McLUCKIE:** And Mr. Fodor, he was specifically tasked
3 to look at the maintenance side, correct?

4 **MR. RICHARD HOLDER:** Correct.

5 **MR. JOHN McLUCKIE:** And, again, you've agreed with me that it's
6 the maintenance team that's responsible for fixing those defects and restoring the
7 reliability of the trains, correct?

8 **MR. RICHARD HOLDER:** There is a -- there is a structure in place
9 around who deals with retrofits and who deals with maintenance. So, if there are
10 defects that are -- that need to be corrected on a vehicle during a warranty period, for
11 instance, then that would be a different team that would be dealing with that sort of
12 activity, that rectification program, as compared to a team that would be dealing with
13 purely maintenance activities.

14 **MR. JOHN McLUCKIE:** But those were all Alstom staff that were
15 performing those two functions, correct?

16 **MR. RICHARD HOLDER:** It was Alstom as a company. To be
17 honest, I'm not sure whether it was Alstom the vehicle supplier that was providing the
18 rectification services, or whether it was Alstom the maintainer, but there is a clear split.
19 When you say "Alstom," there are two Alstoms working within this consortium. There is
20 Alstom maintenance and there is Alstom the vehicle supplier.

21 **MR. JOHN McLUCKIE:** And Mr. Fodor, you'd agree, had
22 significant expertise in transit systems and their commissioning, correct?

23 **MR. RICHARD HOLDER:** Correct.

24 **MR. JOHN McLUCKIE:** And that's, in part, why you hired him, to
25 provide that expertise to the City and an independent set of eyes on the project thus far,
26 correct?

27 **MR. RICHARD HOLDER:** Correct.

28 **MR. JOHN McLUCKIE:** And Mr. Fodor, during the trial period, he

1 was in the maintenance yard and in the control yard monitoring the performance of the
2 system?

3 **MR. RICHARD HOLDER:** He was.

4 **MR. JOHN McLUCKIE:** And he indicated in his testimony
5 yesterday that he observed numerous trains either not being ready for service, not
6 being accepted into service, or having faults on the line that required them to come back
7 to the yard. Are you aware of that?

8 **MR. RICHARD HOLDER:** I heard that testimony. I don't believe
9 that he was challenged on whether those -- that assertion that numerous trains were
10 being returned, whether that was based over several days, numerous trains over seven
11 days, or numerous trains over each day.

12 I am aware that Mr. Fodor provided reports to me on a nightly basis
13 indicating that the practices, that the launch of vehicle, the maintenance activities that
14 occurred on the vehicle overnight, and the maintenance activities that occurred on the
15 track were both supported by correct procedures, supported by correct equipment, and
16 met the plans that were in place. So, that was the documentation that was provided to
17 me by Mr. Fodor.

18 **MR. JOHN McLUCKIE:** And Mr. Fodor testified yesterday that he
19 advised that the maintenance teams at Alstom appeared to be overwhelmed by the
20 maintenance needs of the train system. Would you agree with that?

21 **MR. RICHARD HOLDER:** He has made that statement. I agree.

22 **MR. JOHN McLUCKIE:** And did he provide that information to you
23 back in 2019 when he was making those observations?

24 **MR. RICHARD HOLDER:** He did not provide that to me in a
25 written form. What he provided to me in a written form was that the maintenance
26 practices that were being followed were sufficient to support trial running.

27 **MR. JOHN McLUCKIE:** Okay. I don't want to get too specific, but I
28 think you're avoiding my question. Did Mr. Fodor advise you -- either in writing or orally

1 or by email or some other form, did he advise you that the Alstom maintenance teams
2 appeared to be overwhelmed by the maintenance needs of the system at that point in
3 2019?

4 **MR. RICHARD HOLDER:** He expressed concerns to me about the
5 ability of the maintenance teams to undertake both the rectification work and the
6 maintenance work, but his assertion to me was that the maintenance work was
7 continuing as expected. So, I'm differentiating between the types of activities that were
8 occurring overnight, and I don't believe that Mr. Fodor differentiated between those two
9 activities.

10 So, there was significant work that was being undertaken to provide
11 improvements to the retrofit program for the vehicles, as well as the fixing of
12 deficiencies on the track, as well as just the regular maintenance activities.

13 **MR. JOHN McLUCKIE:** And Mr. Fodor also testified yesterday that
14 he brought it to the attention of people in the City and at Alstom that he felt the staffing
15 levels of the maintenance team were not sufficient to keep up with the maintenance
16 needs given the reliability issues. Do you remember him telling you that?

17 **MR. RICHARD HOLDER:** He has provided that opinion, and it
18 contradicts the opinion that has been provided by ---

19 **COMMISSIONER HOURIGAN:** Sorry. Sorry, Mr. Holder. Mr.
20 Holder, again, these are specific questions put to you as to what you were told. You
21 need to answer those questions. Mr. McLuckie has only limited time. So, when you go
22 off on other tangents, it's not helpful. Answer the question as asked of you. If you want
23 to expand on it, fine. You still have to answer the question.

24 **MR. JOHN McLUCKIE:** So, just going back to my question, Mr.
25 Holder, did Mr. Fodor express an opinion to you, be it in writing or orally, that the Alstom
26 maintenance team was understaffed at that point in time 2019?

27 **MR. RICHARD HOLDER:** Yes.

28 **MR. JOHN McLUCKIE:** And what did the City do about that?

1 **MR. RICHARD HOLDER:** We raised that during the trial running
2 team meetings with either Tom Pate or Claude Jacob that there was concerns over the
3 number of people that were available to undertake maintenance activities.

4 **MR. JOHN McLUCKIE:** And do you know if RTG hired additional
5 staff, and if so, how many?

6 **MR. RICHARD HOLDER:** I do not know the numbers. I know that
7 they responded and they made changes to the maintenance regime.

8 **MR. JOHN McLUCKIE:** Those are all my questions, sir. Thank
9 you.

10 **COMMISSIONER HOURIGAN:** All right. Thank you. Next is
11 Morrison Hershfield.

12 **MR. KYLE LAMBERT:** Thank you, Mr. Commissioner. Kyle
13 Lambert for Morrison Hershfield. I do not have any questions for Mr. Holder.

14 **COMMISSIONER HOURIGAN:** All right. Thank you. Next is
15 Transportation Action Canada, Mr. Jeanes.

16 **MR. DAVID JEANES:** Thank you very much.

17 **--- CROSS-EXAMINATION BY MR. JEANES:**

18 **MR. DAVID JEANES:** Hello, Mr. Holder. I also only have five
19 minutes, and I'm asking about matters that directly affected the public. You talked
20 about the testing that was done to achieve four-minute headways and 23 or 24 minutes
21 end-to-end travel time, and I assume that this was actually without any passengers
22 getting on and off the train, so that under real world conditions, those times might be a
23 bit longer?

24 **MR. RICHARD HOLDER:** The test to achieve the end-to-end run
25 time was using the minimum dwell times that were provided for in the project
26 agreement.

27 **MR. DAVID JEANES:** Right. Okay, thank you. Now, you also
28 mentioned to Ms. McGrann that the passenger capacity could have been

1 accommodated with 9 or 10 vehicles out of 34. And I think if you were talking about
2 two-car trains, I think you would have meant 18 or 20 vehicles out of 34?

3 **MR. RICHARD HOLDER:** That's correct.

4 **MR. DAVID JEANES:** Because there never was a plan that single-
5 car trains would meet the capacity requirements, no.

6 **MR. RICHARD HOLDER:** No.

7 **MR. DAVID JEANES:** Okay. And the -- now, the -- is it correct that
8 given the timings that you were able to measure, that a four-minute headway on the
9 system could only be achieved if you actually had from 13 to 15 trains in service, any
10 fewer trains than that and you couldn't actually reach the four-minute headway?

11 **MR. RICHARD HOLDER:** I know that we need more trains to
12 achieve a more aggressive ---

13 **MR. DAVID JEANES:** Yes.

14 **MR. RICHARD HOLDER:** --- headway over ---

15 **MR. DAVID JEANES:** What ---

16 **MR. RICHARD HOLDER:** --- the 2.3. But in terms of the four
17 minutes, I would have to check the number of trains that were utilized to verify. And it
18 was -- actually, I think it was 3.5 minute headway that was verified as part of the test.

19 **MR. DAVID JEANES:** Yeah, but in fact, to run that on a sustained
20 basis, if it takes 23 minutes or more to go end to end and then handle the reversal, just
21 the arithmetic alone means that you'd need at least 13 trains.

22 And the point that I want to make is that if you were only running
23 nine or 10 trains, then you wouldn't really be able to achieve anything better than about
24 a five-minute headway?

25 **MR. RICHARD HOLDER:** No, there would be an impact on
26 headway.

27 **MR. DAVID JEANES:** Right.

28 **MR. RICHARD HOLDER:** Correct.

1 **MR. DAVID JEANES:** And a five-minute headway compared to a
2 four-minute headway is a 20 percent reduction in the capacity of the system?

3 **MR. RICHARD HOLDER:** Correct.

4 **MR. DAVID JEANES:** Okay. So -- and it's correct that all of these
5 assumptions didn't really take into account the impact of delays, because with crowding
6 on platforms or delays of passengers getting on and off the trains, the minimum
7 headways -- sorry; the minimum dwell times at stations might not be enough. If there
8 were any service failures, then the throughput of trains would be impacted, as it was
9 when, you know, trains were stopped in the first few days because of failures and
10 single-line operation had to be put in, that significantly reduced the system capacity?

11 **MR. RICHARD HOLDER:** I agree.

12 **MR. DAVID JEANES:** Okay. So just from a passenger point of
13 view, certainly, the assumption that the kind of loads that would be there once the
14 parallel bus service was discontinued was a pretty optimistic assumption?

15 **MR. RICHARD HOLDER:** Could you repeat the ---

16 **MR. DAVID JEANES:** No ---

17 **MR. RICHARD HOLDER:** - -- the statement? Sorry.

18 **MR. DAVID JEANES:** I'm just saying given that those calculations
19 that I've talked about really represented ideal conditions, the assumption that the loads
20 could be handled, including with any delays or failures once the parallel bus service had
21 been eliminated, was a pretty optimistic assumption?

22 **MR. RICHARD HOLDER:** I don't know that I can comment on that
23 ---

24 **MR. DAVID JEANES:** Oh, all right.

25 **MR. RICHARD HOLDER:** --- Mr. Jeanes. I think that would be a
26 planning issue to comment on the capacity of the system and the requirement to deal
27 with buses offloading their passengers at the determined stations.

28 **MR. DAVID JEANES:** Okay. I have two other short questions.

1 You talked about the whistleblowers who were brought in when the
2 video surveillance system was not functioning, and what I'm wondering is when did the
3 video system ever achieve the planned operational capability, and did it ever, because,
4 in fact, I believe the whistleblowers, although they don't use whistles any more, that
5 they're still there?

6 **MR. RICHARD HOLDER:** It is expected that the spotters -- we call
7 them spotters, that they will no longer be required very shortly.

8 **MR. DAVID JEANES:** Okay.

9 **MR. RICHARD HOLDER:** The ---

10 **MR. DAVID JEANES:** But ---

11 **MR. RICHARD HOLDER:** --- testing has been -- testing has been
12 taking place for many, many months. But in terms of a successful test, there is -- we
13 are waiting for validation of a successful test from RTG, and so it expected that those
14 spotters will be removed soon.

15 **MR. DAVID JEANES:** But ---

16 **MR. RICHARD HOLDER:** But ---

17 **MR. DAVID JEANES:** --- we ---

18 **MR. RICHARD HOLDER:** --- that's -- I'm sorry.

19 **MR. DAVID JEANES:** --- are looking -- yeah, but we are looking at
20 nearly a three-year delay in the availability of that video surveillance system at stations?

21 **MR. RICHARD HOLDER:** Yes.

22 **MR. DAVID JEANES:** Okay.

23 Last question: We heard a lot earlier from Alstom that when they
24 started vehicle testing, there was significant problems with the track; the wrong track
25 gauge, up to six millimetres less than it should have been; rail corrugation; rail profile
26 problems, all of which affected their initial testing. You were responsible for the City for
27 observing what Alstom was doing, were you aware of this situation when Alstom started
28 testing their vehicles?

1 **MR. RICHARD HOLDER:** We -- I was not personally aware of the
2 issues with the track. My oversight was really with the vehicles and for the systems.
3 And I understand that Alstom did have challenges as they started testing, but the focus
4 for my team was really the challenges that they had with the power supply and
5 distribution system, with the integration with the Thales system. It was not necessarily
6 associated with the track.

7 **MR. DAVID JEANES:** But if you were aware of Alstom's testing
8 problems, you might have needed to refer that to your opposite number with
9 responsibility for the infrastructure?

10 **MR. RICHARD HOLDER:** Yeah. So that was being discussed by
11 my opposite number, yes.

12 **MR. DAVID JEANES:** Okay. Thank you very much. Those are my
13 questions.

14 **COMMISSIONER HOURIGAN:** All right. Thank you, Mr. Jeanes.
15 Next is witness counsel, so counsel for the City.

16 **MR. JESSE GARDNER:** Thank you, Mr. Commissioner.

17 **--- CROSS-EXAMINATION BY MR. JESSE GARDNER:**

18 **MR. JESSE GARDNER:** Mr. Holder, I'd like to start to by asking
19 you a few questions in relation to systems integration.

20 We've heard that there were some issues with systems integration;
21 can you tell us a little bit about the City's oversight with respect to systems integration?

22 **MR. RICHARD HOLDER:** Maybe just to start if, it was clearly
23 OLRTC that had responsibility for system integration on the project. It was -- we
24 understand that in terms of the distribution of requirements, as part of a requirements
25 management plan, and ensuring that, for instance, Thales and Alstom were able to work
26 together very closely from a system integration perspective.

27 We are aware that there were challenges with the information that
28 was provided to both those parties, and it's my understanding that they were given

1 different completion dates. So that was a challenge between Alstom and Thales, and
2 there was not the possibility for the two key partners in providing the service to fully
3 develop their designs in consultation with each other.

4 **MR. JESSE GARDNER:** And Mr. Holder, was that something that
5 the City was aware of at the time during the project?

6 **MR. RICHARD HOLDER:** At the time, the City was not aware of
7 those difficulties. The City was not aware that OLRTC had provided different schedules
8 to the two main suppliers.

9 **MR. JESSE GARDNER:** Okay. And can you tell us a little bit
10 about the steps, if any, that the City took in relation to oversight over that issue of
11 systems integration?

12 **MR. RICHARD HOLDER:** In terms of the period that I was
13 involved, so I started in 2015, as we moved into the testing and commissioning in 2017,
14 then the key part of ensuring sufficient system integration is by reviewing the tests, the
15 system integration tests. So the City was involved in all the system integration tests that
16 were undertaken, and we were also involved in reviewing all the documentation for all
17 the SATs and SITs.

18 **MR. JESSE GARDNER:** Okay. I'd like to show you a letter from
19 RTG to the City dated August 26th, 2019, it's COW0436983.

20 So Mr. Holder, this is a letter we can see from -- if we scroll down,
21 from Mr. Lauch, Peter Lauch of RTG, to Michael Morgan. And if we scroll down further,
22 that encloses another letter from Mr. Nadon to Mr. Lauch of RTG.

23 So if we could scroll down? All right. Thank you.

24 You'll see at the last paragraph, it states:

25 "It is our opinion that in relation to the SITs [so the
26 systems integration tests] listed in Appendix A the
27 system is in general compliance with the PA
28 requirements, drawings, and system architectures,

1 which will perform together and be safe for use,
2 operation and maintenance, as required." (As read)

3 Can you tell us what this letter means to -- or meant to the City?

4 **MR. RICHARD HOLDER:** Well, that was the declaration from RTG
5 that the system would be functioning as expected within the project agreement.

6 **MR. JESSE GARDNER:** You were asked this morning by my
7 friend about the SATs and the SITs tests. I'd like to clarify one point about what that
8 includes. Are the SITS and SATS tests testing systems or are they also intended to test
9 all of the materials, products, hardware, kind of the nuts and bolts of the system?

10 **MR. RICHARD HOLDER:** It's purely the tests on the system,
11 testing the functionality of the systems.

12 **MR. JESSE GARDNER:** And so could there be technical issues
13 that could come up with the system that would not relate to systems that were tested
14 through the SATS and SITS?

15 **MR. RICHARD HOLDER:** It -- yes, that's possible.

16 **MR. JESSE GARDNER:** And would the SATS and SITS catch
17 issues relating to maintenance problems?

18 **MR. RICHARD HOLDER:** No.

19 **MR. JESSE GARDNER:** So looking at this document -- and I
20 assume you received it at the time; is that correct, Mr. Holder?

21 **MR. RICHARD HOLDER:** That is correct.

22 **MR. JESSE GARDNER:** Okay. Looking at this document, what
23 was the City understanding it could do based on receiving this information?

24 **MR. RICHARD HOLDER:** Well, it was a key document for the City
25 to receive that validated that the systems, as designed and as tested, met all the
26 requirements as laid out in the project agreement, and would be expected to function as
27 such in revenue service.

28 **MR. JESSE GARDNER:** Do you recall anyone suggesting that the

1 information in this letter was not accurate?

2 **MR. RICHARD HOLDER:** No.

3 **MR. JESSE GARDNER:** Okay, we can take this letter down.

4 Thank you.

5 I'd like to show you another document, Mr. Holder, it relates to -- it's
6 a fleet safety certificate, so COW0593678.

7 So you'll recall -- so firstly, do you recognize this document, Mr.
8 Holder?

9 **MR. RICHARD HOLDER:** I do.

10 **MR. JESSE GARDNER:** And can we scroll down just a little bit?

11 So you see it's signed and stamped by Lowell Goudge; correct?

12 **MR. RICHARD HOLDER:** Yes.

13 **MR. JESSE GARDNER:** Okay, we'll scroll up.

14 It states that;

15 "This certifies that the Citadis Spirit vehicle designed
16 and delivered under subcontract [the contract with
17 Alstom and OLRTC] as compliant to the project
18 agreement with respect to the safety of the vehicle,
19 and is fit for its intended use as evidenced by Alstom's
20 safety authorization and the attached consolidated
21 safety file, inclusive of all its appendices and
22 references." (As read)

23 Do you recall this, Mr. Holder?

24 **MR. RICHARD HOLDER:** I do.

25 **MR. JESSE GARDNER:** What did -- what did this document, being
26 signed and stamped by Mr. Goudge, mean for the City?

27 **MR. RICHARD HOLDER:** It was a critical document for the City to
28 receive, to have Alstom, the vehicle supplier, declare that the full fleet was safe to move

1 into passenger service.

2 **MR. JESSE GARDNER:** And you were asked by my friend about
3 deficiencies with the vehicles. Can you explain what this certificate means in relation to
4 the outstanding work on the vehicles that you discussed with my friend?

5 **MR. RICHARD HOLDER:** Well, it's always the case that this fleet
6 safety certificate confirmed that the vehicles as designed and as built were safe to run,
7 but on a daily basis a vehicle goes through an inspection, and as a result of an
8 inspection before it goes into service a number of defects may be seen. And depending
9 on those defects the vehicle may be sent to a maintenance area to undertake additional
10 maintenance or additional inspection. But on a daily basis vehicles are certified to be
11 safe to come out onto the line.

12 **MR. JESSE GARDNER:** Okay. If we could scroll down just a bit.
13 So this document is dated September 11th, 2019. Do you see that, Mr. Holder?

14 **MR. RICHARD HOLDER:** I do.

15 **MR. JESSE GARDNER:** So as of this date receiving this stamped
16 document did the City have concerns with respect to the vehicles and the safe use for
17 revenue service?

18 **MR. RICHARD HOLDER:** Based on this document it did not -- the
19 City did not have concerns about the safe use of the vehicle.

20 **MR. JESSE GARDNER:** Thank you.

21 We can take down this document.

22 Mr. Holder, can you tell us a little bit about sort of the role and
23 function up to RSA with respect to the safety auditor?

24 **MR. RICHARD HOLDER:** The City hired an independent safety
25 auditor in summer of -- I believe it was 2017, a year in advance of the expected revenue
26 service date of May 2018, and the role of that safety auditor was to basically become
27 embedded in the systems assurance team such that over a period of many months they
28 would be able to provide an opinion, prior to revenue service availability, that all the

1 safety requirements of the project had been met. And that was a key revenue service
2 availability requirement that was listed in the project agreement.

3 **MR. JESSE GARDNER:** Right, okay. I'd like to show you another
4 document; it's COW0536897.

5 Do you recognize this document, Mr. Holder?

6 **--- EXHIBIT No. 131:**

7 COW0536897 – Rheinland Rail Safety Consulting Safety
8 Audit Report of the Ottawa Stage 1 LRT System 13
9 September 2019

10 **MR. RICHARD HOLDER:** I do.

11 **MR. JESSE GARDNER:** Okay, so it's the safety audit report from
12 Tuv Reiland.

13 Can you scroll down just a little bit?

14 It's dated September 13th, 2019. I'd like to take you to page 16 of
15 the PDF. So section 3.2, revenue readiness:

16 “Given the scope and finding of this safety audit
17 report, as summarized in section 3.1 above, this audit
18 supports the use of the OLRT for passenger carrying
19 operations.” (As read)

20 What did this mean to you and to the City when you received this
21 document?

22 **MR. RICHARD HOLDER:** Well, without this statement we would
23 not have been able to move into passenger service, and with this statement we were
24 able to consider carrying passengers on the LRT system.

25 **MR. JESSE GARDNER:** Did anyone ever suggest to you, or to
26 your knowledge, to the City, that the conclusion in this audit report was not accurate?

27 **MR. RICHARD HOLDER:** No.

28 **MR. JESSE GARDNER:** All right, we can take down this

1 document. Thank you.

2 So I believe we made reference earlier to the engineering safety
3 and assurance case, so I'd like to show that to you, Mr. Holder. It's ALS0084164.

4 Mr. Holder, you're familiar with this document?

5 **MR. RICHARD HOLDER:** I am.

6 **MR. JESSE GARDNER:** Okay. Please scroll down just a bit.

7 So it's dated August 16th, 2019, signed by Mr. Bergeron August
8 20th, 2019, and I'd like to take you to page 4 which is the Executive Summary.

9 So if we scroll down just a bit -- actually sorry; if we could scroll up?

10 So it's paragraph 4:

11 "With the evidence available, it was possible to
12 determine that the highest-level system engineering
13 and systems assurance argument; namely, that
14 Confederation Line phase one is fit for operation,
15 could be made." (As read)

16 What did this document tell the City? What did this mean to the
17 City?

18 **MR. RICHARD HOLDER:** This confirmed to the City that, from
19 RTG's perspective, that the system was safe and that all the requirements of the project
20 agreement had been addressed.

21 **MR. JESSE GARDNER:** Did anyone ever suggest to you that the
22 conclusions in this document were not accurate?

23 **MR. RICHARD HOLDER:** No.

24 **MR. JESSE GARDNER:** Okay, we can take this document down.

25 Thank you.

26 So I'd like to talk to you a little bit about substantial completion.
27 You were asked this morning about the first and second substantial completion notices.
28 Can you tell us, at a high level, why the City determined that RTG had not met

1 substantial completion on the first notice that they provided?

2 **MR. RICHARD HOLDER:** There were a few key deficiencies that
3 completely detracted from the statement that substantial completion had been achieved.
4 So a key element was the availability of LRVs, so there was an insufficient fleet at that
5 time. Another key part was the insufficient status of the document that we were just
6 reviewing, which is the engineering safety assurance case. There were many
7 subdocuments, subcomponents of the ESAC document that were not -- that were not
8 ready. There were -- in terms of the demonstration of a number of key functions of the
9 system, that RTG had not been able to demonstrate to the City that they were ready for
10 substantial completion. And we provided a 16-page response listing all those issues
11 where, in the City's opinion, there were outstanding matters for RTG to deal with.

12 **MR. JESSE GARDNER:** So did you at that time, when that
13 response letter was being drafted rejecting the substantial completion notice, did you
14 feel any pressure or rush to get to substantial completion?

15 **MR. RICHARD HOLDER:** No, it was -- it was the feeling amongst
16 the team that the system would be ready when it would be ready and at that time it was
17 clear that it was not ready.

18 **MR. JESSE GARDNER:** So in relation to the second notice of
19 substantial completion, at a high level again, why this time did the City agree that
20 substantial completion had been met?

21 **MR. RICHARD HOLDER:** Well, there had been a significant
22 improvement in the reliability of the fleet and the availability of vehicles, and many of the
23 issues which had been identified in the original letter had been resolved to the
24 satisfaction of the City. There were still some outstanding issues remaining, but it was
25 of the opinion of the City at the time that those issues could be resolved between
26 substantial completion and revenue service availability.

27 **MR. JESSE GARDNER:** And at that time in relation to the second
28 response from the City and with respect to the substantial completion notice, did you

1 feel pressured or rushed to grant substantial completion?

2 **MR. RICHARD HOLDER:** No.

3 **MR. JESSE GARDNER:** You were asked by my friend this
4 morning about deferred works, and specifically in relation to substantial completion.
5 Can you tell us why the City agreed to defer certain works, and on what basis?

6 **MR. RICHARD HOLDER:** Well, it was on the basis that we were
7 assured by RTG that many of the defects that were still there at the second substantial
8 notice would be able to be rectified by the time we got to revenue service availability,
9 which was several weeks later.

10 There was also the understanding that while substantial completion
11 had been achieved, there were still trial running to perform and that the trial running was
12 the test of the full system and the full railway. And if there were issues that were
13 significant enough to affect the availability and the reliability to run trial running, then
14 they would have been apparent, and the full revenue service availability payment would
15 not have been due to RTG at that time. So we still -- we still had ---

16 **COMMISSIONER HOURIGAN:** Sorry; finish your answer. I
17 thought you were done.

18 **MR. RICHARD HOLDER:** Yes.

19 **COMMISSIONER HOURIGAN:** Go ahead.

20 **MR. RICHARD HOLDER:** Sorry. There were still steps remaining
21 before we entered passenger service.

22 **COMMISSIONER HOURIGAN:** All right, we're going to take the
23 lunch break then. It's one o'clock, thank you. Two o'clock.

24 **THE REGISTRAR:** Order, all rise.

25 The Commission is adjourned until 2 p.m.

26 --- Upon recessing at 1:00 p.m.

27 --- Upon resuming at 1:59 p.m.

28 **--- MR. RICHARD HOLDER, RESUMED:**

1 **COMMISSIONER HOURIGAN:** All right, we're going to continue
2 the examination by Mr. Gardner of his client.

3 And, Mr. Holder, are you there? I see Mr. Holder. You can hear us
4 fine, sir? Maybe not. Mr. Holder, can you hear us? Mr. Holder, we can see you. Can
5 you hear us?

6 **MR. RICHARD HOLDER:** I can now.

7 **COMMISSIONER HOURIGAN:** Okay.

8 **MR. RICHARD HOLDER:** I had an issue a couple of minutes ago.
9 Thank you.

10 **COMMISSIONER HOURIGAN:** That's okay. That's fine. Mr.
11 Gardner's going to continue his examination now, okay?

12 **MR. RICHARD HOLDER:** Okay.

13 **MR. JESSE GARDNER:** Thank you, Mr. Commissioner.

14 **--- CROSS-EXAMINATION BY MR. JESSE GARDNER, (Cont'd):**

15 **MR. JESSE GARDNER:** So, Mr. Holder, I want to pick up where
16 we were leaving off before the lunch break. You recall that we were discussing
17 substantial completion. Counsel asked you this morning about deferred works and
18 about minor deficiencies -- a minor deficiencies list. Do you recall that?

19 **MR. RICHARD HOLDER:** I do.

20 **MR. JESSE GARDNER:** Can you speak to whether it's possible to
21 have a significant item of work which would not be on the minor deficiencies list, which
22 would not also -- which would also not impact safety use and enjoyment of the system.
23 Is that possible?

24 **MR. RICHARD HOLDER:** I believe it is possible. If it's -- and I
25 think the example that I provided is a good example where there is a particular function
26 that was designed into the platform edge camera system, that function being a hazard --
27 the mitigation of the hazard that somebody would be trapped by a door. We are able to
28 efficiently mitigate that hazard through other means, other than the CCTV camera

1 system. So there is -- there is no change -- excuse me -- there is no change to that --
2 the overall hazard mitigation. We are able to mitigate that hazard effectively.

3 **MR. JESSE GARDNER:** So can you expand a little bit on that, and
4 specifically how it was that the City was satisfied with deferring certain works until after
5 substantial -- were not on the minor deficiency list?

6 **MR. RICHARD HOLDER:** The minor deficiency list typically is, you
7 know, many elements that are considered each and of themselves to be quite small;
8 quite small in dollar value and possibly relatively easy to remedy, it just takes time.

9 The deferrals that we referred to in the notice of substantial
10 completion were considered to be more significant pieces of work requiring more effort,
11 and in terms of the value of that work, would be considered of a much higher value in
12 comparison to what typically appears on a minor deficiency list. So that's why those
13 deferred works were listed separately.

14 **MR. JESSE GARDNER:** Okay.

15 **MR. RICHARD HOLDER:** And sorry; and it was also the
16 expectation that that those defers -- deferred works were to be completed in a specific
17 timeframe, which would be different to the items that are recorded on the minor
18 deficiency list, which need to be remedied, rectified, or fixed by the time of project
19 completion, which was specified in the project agreement. The deferred item list had
20 different dates for completion that were provided for in -- well, ultimately in our term
21 sheet.

22 **MR. JESSE GARDNER:** And can you tell us a little bit about how
23 the City considered the deferred works, in the context of its safe use and enjoyment of
24 the system?

25 **MR. RICHARD HOLDER:** We don't believe that the deferred works
26 had an impact on the safe use of the system.

27 **MR. JESSE GARDNER:** Okay. Mr. Holder, I'd like to ask you a
28 little bit about the training that the operators and controllers received. Can you tell us

1 about your perspective, and your understanding of the training received by operators
2 and controllers?

3 **MR. RICHARD HOLDER:** So training was -- well, the provision of
4 training material was the responsibility of RTG, but the City has a very robust inhouse
5 training program which has historically for decades trained bus operators and other staff
6 involved in the transit operations. So the between the delivery of material from RTG
7 and the management of the training program within OC, the training itself started well in
8 advance of the first revenue service availability date which was May 2018. The
9 unfortunate delay that occurred in revenue service availability until the Fall of 2019
10 provided for additional time for our -- for the two key groups of staff; that would be the
11 light rail operators and the light rail controllers.

12 But the training itself did not just deal with operators and
13 controllers. It also dealt with train the trainers and it also dealt with the emergency
14 responding agencies. So it was necessary, as part of the program of delivery of the
15 LRT system, that the various emergency responder groups were trained on how to deal
16 with issues that may occur on the light rail system. And all that was judged to be
17 satisfactorily completed as part of the delivery of the operator safety case.

18 The operator safety case document was prepared by Parsons, and
19 that operator safety case reviewed the procedures, the training programs, the
20 curriculums, the certification process, the years of experience in order to be satisfied
21 that the operations team was ready for revenue service.

22 That document was a deliverable from the City to RTG and RTG
23 incorporated the operator safety case in their overall engineering safety assurance case
24 as part of the confirmation that at the time of revenue service availability, the system
25 was safe to run.

26 **MR. JESSE GARDNER:** Thank you, Mr. Holder.

27 Did RTG or Alstom, or anyone that you recall, raise an issue with
28 respect to the sufficiency of training before the launch of the system?

1 **MR. RICHARD HOLDER:** No.

2 **MR. JESSE GARDNER:** Okay.

3 **MR. RICHARD HOLDER:** On- - sorry.

4 **MR. JESSE GARDNER:** Go ahead.

5 **MR. RICHARD HOLDER:** I will stick with answering the question,
6 sorry.

7 **MR. JESSE GARDNER:** In relation to the burn-in of the vehicles
8 can you just briefly describe what was undertaken including how many kilometres were
9 put on the vehicles before launch?

10 **MR. RICHARD HOLDER:** As part of the review of the final
11 acceptance procedures associated with the City accepting the vehicles there was
12 discussion about what would be an appropriate burn-in period or burn-in kilometrage.
13 And so what was agreed between the parties was that 4,000 kilometres per vehicle
14 would be appropriate as a burn-in period before the City would accept the vehicles, on a
15 vehicle-by-vehicle basis. And what we know is that by the time we reached revenue
16 service availability, the cumulative mileage on the fleet was approaching 1.1 million
17 kilometres. So with doing the maths roughly at least 30,000 kilometres per vehicle.

18 **MR. JESSE GARDNER:** Okay, thank you.

19 I'd like to move on to trial running, and you'll recall that this morning
20 my friend asked you some questions with respect to the criteria from 2017. Do you
21 recall that, Mr. Holder?

22 **MR. RICHARD HOLDER:** I do.

23 **MR. JESSE GARDNER:** Specifically the AVKR per day would be
24 96 percent for nine out of twelve days; do you recall that?

25 **MR. RICHARD HOLDER:** Correct.

26 **MR. JESSE GARDNER:** Can you tell us your view as to the
27 sufficiency of that criteria or that percentage?

28 **MR. RICHARD HOLDER:** At the time that that was presented to

1 the team in 2017, then it was considered to be a sufficient target to achieve during trial
2 running, and that was based on the individuals that proposed that target had been
3 involved in many start-ups of light rail systems across North America. And I think there
4 is additional testimony from others that would indicate that 98 percent, which was
5 subsequently agreed in 2019, that that was very high target to achieve.

6 **MR. JESSE GARDNER:** Okay, thank you, Mr. Holder.

7 And in terms of how the trial running team operated, I understand
8 that there's data being produced, you know, on a daily basis and that the team was
9 looking at that data. Can you explain to us why if there's data being produced on the
10 performance it was necessary to have a trial running assessment team?

11 **MR. RICHARD HOLDER:** So the data that was brought forward to
12 the trial running team was raw data taken from various systems, but it was the
13 responsibility of the TR team to provide some judgment in those situations where a
14 particular criteria had either just been missed or just been achieved. And so where
15 there were clear shortcomings in a particular category, and the percentage points were
16 well below the value that was indicated, and then it was clear that it was a fail. But in
17 those circumstances where we had -- for example, there was a target of 32 vehicles
18 providing peak service in the afternoon during a week day. If actually 31 were recorded
19 instead of the 32, then we would dive a little bit deeper into the details as to why was --
20 why were we short one vehicle and it -- the information that was provided to us was, you
21 know, flat data without -- based on analysis, but we were able to drill down where
22 necessary, ask questions and get further confirmation before we decided whether we
23 should pass or fail a particular criteria; we applied judgment.

24 **MR. JESSE GARDNER:** Okay. And during those meetings, at any
25 point did you feel pressured to reach a certain conclusion?

26 **MR. RICHARD HOLDER:** No.

27 **MR. JESSE GARDNER:** And by the time trial running was
28 complete, what was your view or perspective on the success or the sufficiency of the

1 trial running process that had taken place?

2 **MR. RICHARD HOLDER:** Well, I believe that we'd met the
3 requirements of the trial running procedures, and I was satisfied that that project
4 agreement requirement of satisfactory performance of the trial running had been
5 achieved.

6 **MR. JESSE GARDNER:** And when the criteria was reduced or
7 reverted back to the originally agreed criteria of 96 percent, did that raise any concerns
8 for you?

9 **MR. RICHARD HOLDER:** We were already satisfied with the 96
10 percent so reverting back to that number didn't cause any concerns because there was
11 the expectation that that was the number we were going to use at the start of trial
12 running back in 2017.

13 **MR. JESSE GARDNER:** Okay, thank you, Mr. Holder.

14 I'd like to now turn to readiness for maintenance and operations. I'd
15 like to show you a document; it's ALS0012333.

16 Okay, so if we just scroll down a little bit. Mr. Holder, do you
17 recognize this document; the Reliability, Availability and Maintainability report?

18 **--- EXHIBIT No. 132:**

19 ALS0012333 – OLRTC OLRT Reliability, Availability and
20 Maintainability Report 23 May 2019

21 **MR. RICHARD HOLDER:** I do.

22 **MR. JESSE GARDNER:** It's dated May 23rd, 2019. Do you see
23 that?

24 **MR. RICHARD HOLDER:** I do.

25 **MR. JESSE GARDNER:** Okay. And I'd like to take you to page
26 three of the PDF, the Executive Summary. Sorry, if we scroll down just a little bit.

27 The last sentence of this executive summary, Mr. Holder, states, "It
28 is considered that the Ottawa Confederation Line Phase 1 infrastructure is adequately

1 reliable and suitable for the onset of RSA.” Do you see that?

2 **MR. RICHARD HOLDER:** I do.

3 **MR. JESSE GARDNER:** So, when -- I take it you received this
4 document and reviewed it at the time?

5 **MR. RICHARD HOLDER:** Yes.

6 **MR. JESSE GARDNER:** What was your understanding, and to the
7 extent of your knowledge, the City’s understanding of what this document was telling
8 the City?

9 **MR. RICHARD HOLDER:** It was our understanding that this
10 document confirmed that RTG would be able to meet the reliability requirements of
11 revenue service availability, and that was based on the analysis and the work
12 completed by the systems engineering team of SEMP.

13 **MR. JESSE GARDNER:** And who specifically was telling the City
14 this? Who did you understand was making these assertions to the City?

15 **MR. RICHARD HOLDER:** It was RTG.

16 **MR. JESSE GARDNER:** Okay. And do you recall Parsons ever
17 telling you that they disagreed with the content of this document?

18 **MR. RICHARD HOLDER:** No.

19 **MR. JESSE GARDNER:** Do you recall Parsons ever -- and not
20 specific to the document, but Parsons ever raising with you that the Ottawa
21 Confederation Line Phase 1 infrastructure is not reliable and suitable for the onset of
22 RSA?

23 **MR. RICHARD HOLDER:** No.

24 **MR. JESSE GARDNER:** Okay. Thank you. We can take this
25 document down.

26 I’d like to talk to you about revenue service availability. If we could
27 just screen share the definition of revenue service availability, it’s COW 281.

28 So, if we move to page 55 of the PDF, and it’s section 1.589. Mr.

1 Holder, are you familiar with this definition?

2 **--- EXHIBIT No. 133:**

3 COW0000281 – OLRT Project Agreement Schedule 1
4 Definitions and Interpretation 7 November 2019

5 **MR. RICHARD HOLDER:** I am.

6 **MR. JESSE GARDNER:** Can you tell us what it is the City is
7 expecting to receive, based on this definition, when it comes time to grant RSA?

8 **MR. RICHARD HOLDER:** Well, that could be a long response. I
9 would say that after substantial completion and after trial running has been
10 demonstrated, the key document is Document D, the compliance at that time with the
11 safety requirements as approved by the safety auditor. So, that was the last document
12 that the City needed to have prior to believing that we could open up for passenger
13 service. I don't know if you need any more information.

14 **MR. JESSE GARDNER:** No, I think that's okay, Mr. Holder. I'd like
15 to now turn you to a document. It's the final systems completion letter. So, it's COW
16 0159023.

17 So, I'd like to -- so this is dated August 26, 2019. Are you familiar
18 with this letter, Mr. Holder?

19 **--- EXHIBIT No. 134:**

20 COW0159023 – Letter RTG to City of Ottawa 26 August
21 2019

22 **MR. RICHARD HOLDER:** I am.

23 **MR. JESSE GARDNER:** Okay. So, if we scroll down, and to the
24 next part of the letter, if we scroll down to the next page. Starting with the first
25 paragraph, "Please find within this letter an outline of remaining deficiencies that the
26 OLRTC feels is not critical to revenue service."

27 What did this letter and that statement mean to the City when you
28 received this letter?

1 **MR. RICHARD HOLDER:** The City understood that this letter was
2 confirming that revenue service availability was achieved, that passenger service could
3 begin; however, there were a number of deficiencies that were remaining, but they were
4 not critical to revenue service.

5 **MR. JESSE GARDNER:** Okay. If we could scroll down to the final
6 bullet on this first page. "The safety deficiency list contains three items related to
7 project safety that had been deemed minor and will not affect the safety of the public in
8 any way."

9 Was that your understanding at the time you received this letter,
10 Mr. Holder?

11 **MR. RICHARD HOLDER:** It is, or it was.

12 **MR. JESSE GARDNER:** And were any concerns to the contrary
13 raised to the City at that time?

14 **MR. RICHARD HOLDER:** No.

15 **MR. JESSE GARDNER:** So, did anyone ever suggest to you or, to
16 your knowledge, anyone at the City that revenue -- that the system was not ready for
17 revenue service?

18 **MR. RICHARD HOLDER:** No.

19 **MR. JESSE GARDNER:** Okay. We can take down this document.
20 I'd like to now take you to the revenue service notice that the City received August 30th,
21 2019. The document number is COW 0159308.

22 Are you familiar with this document, Mr. Morgan -- or Mr. Holder?

23 **--- EXHIBIT No. 135:**

24 COW0159308 – Letter RTG to City of Ottawa 30 August
25 2019

26 **MR. RICHARD HOLDER:** I am.

27 **MR. JESSE GARDNER:** Okay. We'll scroll down. So, I believe
28 this is the revenue service availability notice provided to the City by RTG; is that

1 accurate?

2 **MR. RICHARD HOLDER:** Correct.

3 **MR. JESSE GARDNER:** And you've read this document, I
4 assume, in detail?

5 **MR. RICHARD HOLDER:** Yes.

6 **MR. JESSE GARDNER:** What is RTG telling the City when it
7 delivers a revenue service availability notice?

8 **MR. RICHARD HOLDER:** They are informing the City that they
9 have met the revenue service availability requirements as outlined in the project
10 agreement.

11 **MR. JESSE GARDNER:** And we talked earlier about some items
12 that were outstanding prior to RSA. Do you see here, it states, "More specifically, the
13 following items have been addressed"? And I take it you are generally familiar with
14 what those items are. Can you tell us about the City's understanding of those items
15 being addressed by RTG?

16 **MR. RICHARD HOLDER:** These are the items that had been
17 deferred at the time of substantial completion, but only deferred until the point of
18 revenue service availability. So, RTG is confirming in this notice that those deferred
19 items that were to be achieved by revenue service availability have been achieved, and
20 they list them.

21 **MR. JESSE GARDNER:** And this notice was reviewed by the ISA
22 and the independent certifier; is that correct?

23 **MR. RICHARD HOLDER:** Correct.

24 **MR. JESSE GARDNER:** What was their opinion on this RSA
25 notice?

26 **MR. RICHARD HOLDER:** They agreed with the City opinion.

27 **MR. JESSE GARDNER:** And did the City rely on this RSA notice
28 and the independent certifier and safety auditor's opinion with respect to revenue

1 service and launch?

2 **MR. RICHARD HOLDER:** We did rely on this notice, yes.

3 **MR. JESSE GARDNER:** And you relied on it in what sense?

4 **MR. RICHARD HOLDER:** Well, this was the confirmation from
5 RTG that they were ready for revenue service availability and passenger service.

6 **MR. JESSE GARDNER:** And sitting here now, is it your view that
7 the City received accurate information from RTG and its subcontractors in relation to the
8 systems readiness for RSA and launch?

9 **MR. RICHARD HOLDER:** I believe so.

10 **MR. JESSE GARDNER:** Okay. And did anyone ever tell you or, to
11 your knowledge, anyone at the City that the system was not safe to launch prior to its
12 launch?

13 **MR. RICHARD HOLDER:** No.

14 **MR. JESSE GARDNER:** Did anyone ever tell you or, to your
15 knowledge, anyone at the City that the system was not fit for use?

16 **MR. RICHARD HOLDER:** No.

17 **MR. JESSE GARDNER:** Did anyone ever tell you or, to your
18 knowledge, anyone at the City that the system would have reliability issues, such that
19 the system should not be launched?

20 **MR. RICHARD HOLDER:** No.

21 **MR. JESSE GARDNER:** Did anyone ever tell you or, to your
22 knowledge, anyone at the City that the system could not be maintained in revenue
23 service, including due to staffing issues?

24 **MR. RICHARD HOLDER:** No.

25 **MR. JESSE GARDNER:** Did anyone at Parsons, or any other
26 consultant of the City's, tell the City that the system should not be launched?

27 **MR. RICHARD HOLDER:** No.

28 **MR. JESSE GARDNER:** And at the time of revenue service

1 availability achievement and prior to launch, did you feel that there was pressure to
2 grant RSA and to launch the system?

3 **MR. RICHARD HOLDER:** No.

4 **MR. JESSE GARDNER:** Okay. I'd like to talk to you just briefly
5 about your understanding of when the City could launch the system after RSA.

6 **MR. RICHARD HOLDER:** Passenger service was contemplated
7 to begin the day after revenue service availability in the project agreement; however, the
8 decision as to when to start passenger service was solely with the City of Ottawa to
9 determine when we would start passenger service.

10 **MR. JESSE GARDNER:** And I take it the City did not open the
11 following day. Can you tell us about the City's activities prior to launch?

12 **MR. RICHARD HOLDER:** There were a number of exercises and
13 drills that the City wanted to undertake after the system had been handed over to the
14 City, and the City viewed this time between revenue service availability and the start of
15 passenger service as a period to improve the familiarity of their staff with the various
16 processes and procedures and elements of the system. So, it was a period to enhance
17 the operating understanding of the operating team.

18 **MR. JESSE GARDNER:** Thank you. And just briefly, Mr. Holder,
19 I'd like to bring you to some of the statements that were made yesterday by Parsons.
20 First, can you just briefly explain the role of Jonathan Hulse and Mike Palmer, the role
21 they had in trial running and RSA?

22 **MR. RICHARD HOLDER:** They did not really have a role in trial
23 running and the determination of RSA. They were brought on as subject matter experts
24 to help with the creation of certain documentation, and also to help with the Schedule 10
25 review process that was still underway for some documentation. But they were -- in
26 terms of subject matter experts for the various systems involved, we had other experts.
27 So, there was another member of the Parsons team, Mr. Glen McCurdy, who was
28 providing us expert support for oversight of the Thales CBTC system.

1 **MR. JESSE GARDNER:** Okay. And just briefly, can you explain
2 Mr. Fodor's role as it relates to trial running and revenue service availability?

3 **MR. RICHARD HOLDER:** So, Mr. Fodor was involved for several
4 years as part of the oversight of documentation review. He was also -- he also had the
5 task of drafting the first maintenance plan or concept of a maintenance, is the correct
6 title. And then as we approached revenue service, as we approached trial running, then
7 he was attending the MSF, attending meetings, viewing the maintenance activities that
8 were occurring by being stationed at the YCC.

9 And so, the key role was to understand how RTG was performing
10 throughout the night, from the receipt of the vehicles, the start of the maintenance of the
11 vehicles, the understanding of how maintenance of weigh vehicles were being launched
12 onto the guideway, and undertaking track maintenance. Another system maintenance
13 within the guideway, he was there to monitor the launch of the vehicles, which involved
14 RTG bringing a vehicle to a handover platform, and then being accepted by an OC
15 operator before being launched into service.

16 **MR. JESSE GARDNER:** Okay.

17 **MR. RICHARD HOLDER:** So, I was looking for confirmation from
18 him that the practices, the operations that he witnessed, would be fit to support revenue
19 service.

20 **MR. JESSE GARDNER:** Okay, Mr. Holder, we're coming up on
21 our time here. So, I just want to briefly finish these few questions. Mr. Fodor, when
22 asked by the Commission, responded that he had some concerns about the system's
23 readiness for use and felt that trial running was rushed. Can you tell us your response
24 to those assertions by Mr. Fodor?

25 **MR. RICHARD HOLDER:** There was a recognition by a number of
26 people that there were lots of activities being undertaken during that evening
27 engineering and maintenance period. So, in addition to the necessary maintenance for
28 the LRT daily operations, then there were other activities involved in the rectification of

1 the defects, and activities mainly linked to the deferred works and the minor deficiency
2 list.

3 So, in terms of the number of activities taking place, then there was
4 a significant volume of work that was being undertaken. But as a subset of that work,
5 the focused work that was being undertaken in support of maintenance for revenue
6 service, then Mr. Fodor had indicated in the record sheets that he provided to me that
7 those maintenance activities were being carried out in accordance with the plans and
8 the procedures that were in place.

9 **MR. JESSE GARDNER:** Okay. Thank you. I have one final
10 question for you, Mr. Holder. You were asked by my friend this morning about why
11 we're here today, specifically in relation to the problems during the maintenance period.
12 Can you tell us your view of the problems -- specifically problems, and briefly, that have
13 led us here today and the connection between those problems in the maintenance
14 period and the status of RSA or at RSA?

15 **MR. RICHARD HOLDER:** The first few weeks of operations, I
16 recall, in terms of passenger service, the system was operating well, but then there
17 were a number of incidents that brought challenges to RTM, and there were -- and,
18 unfortunately, those new issues continued throughout the first few months of operations.
19 I am aware that RTM struggled to provide the necessary resources to deal with these
20 unexpected events that occurred in the first few months, and that that significantly
21 impaired the availability of the train.

22 **MR. JESSE GARDNER:** Okay. Thank you, Mr. Holder. Mr.
23 Commissioner, those are our questions. Thank you.

24 **COMMISSIONER HOURIGAN:** All right. Thank you, Mr. Gardner.
25 Re-examination?

26 **MS. KATE McGRANN:** No, Mr. Commissioner. Thank you.

27 **COMMISSIONER HOURIGAN:** Mr. Holder, thank you for coming
28 today and giving your testimony. It was very helpful to the Commission and its work.

1 You are excused. We are down until tomorrow at 9:00 a.m. Thank you.

2 **MR. RICHARD HOLDER:** Thank you.

3 **THE REGISTRAR:** Order. All rise. The hearing is now closed for
4 the day, and will resume tomorrow at 9:00 a.m.

5 --- Upon adjourning at 2:32 p.m.

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CERTIFICATION

8

9 I, Wendy Clements, a certified court reporter, hereby certify the foregoing pages to be
10 an accurate transcription of my notes/records to the best of my skill and ability, and I so
11 swear.

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13 Je, Wendy Clements, une sténographe officiel, certifie que les pages ci-hautes sont une
14 transcription conforme de mes notes/enregistrements au meilleur de mes capacités, et
15 je le jure.

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