# SCHEDULE 3 PROJECT SCHEDULE

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Appendix A Project Schedule

### PART 1 GENERAL PROVISIONS

### **1.1 Diligent Performance of Project Work**

Project Co shall:

- (a) commence the Project Work promptly following the Effective Date;
- (b) pursue the Project Work diligently to ensure that each of the milestone events for the completion of the Project Work, in each case as identified in the Project Schedule, as amended from time to time in accordance with Section 1.2 [Project Schedule] of this Schedule, is achieved at or before the time specified therefor in the Project Schedule, as so amended by Project Co; and
- (c) perform the Project Work in material conformity with the Works Schedule, as amended from time to time in accordance with Section 1.3 [Works Schedule] of this Schedule, and with the Construction Management Plan, as amended from time to time in accordance with Section 1.5 [Construction Management Plan] of this Schedule.

### **1.2 Project Schedule**

- (a) The Project Schedule sets out the schedule in accordance with which Project Co is to carry out the Project Work provided for in the Project Requirements.
- (b) Project Co shall submit to the Province's Representative for review in accordance with the Review Procedure an update of the Project Schedule to reflect any extension of any dates included therein as agreed or determined in accordance with Part 7 [Province Changes and Project Co Proposals] or Part 8 [Supervening Events], or any proposed amendments to the Project Schedule contemplated by Section 6.16(e) of this Agreement.
- (c) If in the reasonable opinion of the Province or Project Co at any time the actual progress of the Project Work does not conform with the Project Schedule, then, within 10 days of being so advised by the Province or (if earlier) becoming aware of such nonconformity, Project Co shall:
  - (i) provide the Province's Representative with a report identifying the reasons for such nonconformity with the Project Schedule;
  - (ii) submit to the Province's Representative for review in accordance with the Review Procedure a revised Project Schedule, which shall:
    - (A) be in accordance with Good Industry Practice;
    - (B) satisfy the Design and Construction Requirements; and
    - (C) provide for the Project Work to be pursued diligently in accordance with Section 1.1 [Diligent Performance of Project Work] of this Schedule.

(d) The Province may at any time, as a Province Change pursuant to Part 7 [Province Changes and Project Co Proposals] of this Agreement, request a revision to the Project Schedule to accelerate the performance of the Project Work or any component thereof.

#### **1.3** Works Schedule and Critical Path Schedule

- (a) Project Co shall prepare and submit to the Province's Representative for review in accordance with the Review Procedure:
  - (i) within 90 calendar days of the Effective Date:
    - (A) an update to the Works Schedule provided pursuant to Schedule 24 [Closing Deliveries], reflecting the actual progress of the Project Work to the date of submission and the expected progress of the Project Work thereafter, up to and including the achievement of Substantial Completion, On-Time Performance Demonstration Completion, TIDS Performance Demonstration Completion; and
    - (B) an initial Critical Path Schedule,

both of which shall be in all respects consistent with the Project Schedule;

- (ii) at the same time as a revised Project Schedule is submitted in accordance with Section 1.2(b), 1.2(c) or 1.2(d) of this Schedule, a revised Works Schedule and a revised Critical Path Schedule in respect of each such revised Project Schedule, both of which shall be in all respects consistent with such revised Project Schedule; and
- (iii) on the first Business Day of each month:
  - (A) a revised Works Schedule and a revised Critical Path Schedule each reflecting the actual progress of the Project Work to the date of submission and the expected progress of the Project Work thereafter, up to and including the achievement of Substantial Completion, On-Time Performance Demonstration Completion, TIDS Performance Demonstration Completion;
  - (B) a detailed narrative of the revised Work Schedule, which includes a section dedicated to the Critical Path Schedule; and
  - (C) a detailed time-distance schedule that graphically presents the schedule for the Project.
- (b) Other than in the circumstances referred to in Section 1.3(a) of this Schedule, if Project Co wishes to make any amendment to the Works Schedule, or if in the reasonable opinion of the Province or Project Co at any time the actual progress of the Project Work does not conform with the Works Schedule in any material respect, then, prior to making

any such amendment and within 15 days of being so advised by the Province or (if earlier) becoming aware of such nonconformity (as applicable), Project Co shall:

- (i) provide the Province's Representative with a report identifying the reasons for such amendment to or nonconformity with the Works Schedule and a narrative recovery plan (which shall include resource requirements, working hours and shifts and contingency actions) to remedy such nonconformity; and
- (ii) submit to the Province's Representative for review in accordance with the Review Procedure a revised Works Schedule and a revised Critical Path Schedule.
- (c) The initial Works Schedule and any revised Works Schedule submitted in accordance with this Section 1.3 shall be submitted in both PDF format and .xer file format and shall:
  - (i) provide a detailed breakdown of the Project Work into details of Design and Construction indicating:
    - (A) the sequencing of activities required by this Agreement;
    - (B) a breakdown of the Design components including the following:
      - (1) Tunnel design, including civil works;
      - (2) elevated Guideway design, including civil works;
      - (3) Underground Structures design, including civil works;
      - (4) Stations design;
      - (5) Systems design;
      - (7) roads design, including Trolley Overhead;
      - (8) environmental design;
      - (9) Utility Work design; and
      - (10) key dates for Design submissions;
    - (C) provide a breakdown of the Works Schedule into the main Construction components including the following:
      - (1) Tunnel, including civil works;
      - (2) elevated Guideway, including civil works;
      - (3) Underground Structures, including civil works;

- (4) Stations;
- (5) Systems;
- (7) roads, including Trolley Overhead;
- (8) work to Existing Transit Facilities;
- (9) Utility Work;
- (10) environmental permits, approvals and works;
- (11) establishment of pre-cast facilities and other production and support facilities; and
- (12) other significant Project Work functions on the critical path;
- (D) the early and late start completion date for each activity;
- (E) the proposed duration in working days for each activity;
- (F) free float and total float time for each activity, including reasonable allowances for the occurrence of events which may delay the Project Work; and
- (G) the dependency of each activity on other activities;
- (H) the critical path schedule;
- (ii) provide a breakdown into sub-activities such that the duration of any sub-activity is not more than the amount which, based upon the nature of the activity, the Province's Representative reasonably requires to readily monitor the status and progress of such sub-activity and the Project Work, and in any event is not more than 15 days unless a longer duration is required given the nature of the subactivity and is consistent with Good Industry Practice;
- (iii) include the number of working days and hours, with identification of days when Construction will not proceed, such as days that are not Business Days;
- (iv) include a schedule of Permits, detailing when each Permit will be required and when application will be made for each Permit;
- (v) include testing and commissioning of all Systems and sub-systems;
- (vi) include each of the events for the completion of the Project Work, in each case as identified in the Project Schedule, as amended from time to time in accordance with Section 1.2 [Project Schedule] of this Schedule;

- (vii) include all additional information reasonably requested by the Province's Representative to enable the Province to monitor the progress of the Project Work;
- (viii) not include open-ended activities (including activities having no predecessor or successor) except for the first and last activities in the Work Schedule;

and shall:

- (ix) be in accordance with Good Industry Practice;
- (x) satisfy the Design and Construction Requirements;
- (xi) be in sufficient detail so as to enable the Province to resource itself appropriately and so as to permit the Province to plan adequately for the availability of external resources to enable the Province to comply with its obligations under this Agreement, including under Schedule 4 [Design and Construction];
- (xii) be in all respects consistent with the Project Schedule; and
- (xiii) provide for the Project Work to be commenced and pursued diligently in accordance with Section 1.1 [Diligent Performance of Project Work] of this Schedule; and
- (xiv) include a Primavera P6 data file, including baseline, in XER format.
- (d) Project Co shall develop the Works Schedule using Oracle Primavera P6 scheduling software.
- (e) The Critical Path Schedule and any revised Critical Path Schedule submitted in accordance with Section 1.3 shall:
  - (i) clearly indicate the critical path to the milestones set out in the Project Schedule; and
  - (ii) include near-critical-paths (for the purposes of this Schedule, "near-critical-path" means a sequence of activities with low float which, if exhausted, becomes a critical path sequence for the Project).
- (f) Project Co shall use the same source data file for producing both the Works Schedule and the Critical Path Schedule and any revised Works Schedule and Critical Path Schedule submitted in accordance with Section 1.3.

#### 1.4 Conflict between Project Schedule and Works Schedule

In the event of any conflict between the Project Schedule and the Works Schedule, the Project Schedule shall prevail, unless otherwise agreed by the Province in its discretion.

#### 1.5 Construction Management Plan

- (a) Project Co shall prepare and submit to the Province's Representative for review in accordance with the Review Procedure, within 75 calendar days after the Effective Date, a plan (the "Construction Management Plan") which shall describe how the key components of the Construction will be carried out and the connection to the Works Schedule including, at a minimum, the following:
  - (i) identify and describe construction methodologies and work procedures for each of the following:
    - (A) Tunnel, including spoil disposal, TBM support facilities, and site access, such as entry shafts and exit shafts as applicable;
    - (B) Underground Structures, including crossover construction, crosspassages, and U-section;
    - (C) Elevated Guideway, including civil works;
    - (D) Stations;
    - (E) Systems;
    - (F) roads;
    - (G) works to Existing Transit Facilities;
    - (H) Utility Work;
    - (I) obtaining environmental Permits and performing environmental works;
    - (J) establishment of pre-cast facilities and other production and support facilities; and
    - (K) other significant Project Work on the critical path;
  - (ii) for each of the components set out in paragraph (i) above, include details to describe each of the following:
    - (A) key issues and constraints affecting Construction and strategies to manage such issues and constraints;
    - (B) construction sequencing and staging including details to describe implementation of lane closures, staging and sequencing of Project Work to maintain minimum traffic requirements, temporary works, temporary bridges and Temporary Decking, laydown areas, material supply routes, fabrication facilities and sources, and batching plants;

- (C) proposed construction and erection strategy for all Structures, including those spanning or adjacent buildings, roadways and heavy rail tracks, and those involving building modifications or demolitions;
- (D) utility relocation, protection, installation and co-ordination;
- (E) noise mitigation during Construction, particularly around the tunnelling activities, underground construction, piling activities, hours of work and limits on vibrations caused by Construction operations; and
- (F) monitoring programs for adjacent existing facilities such as Existing Transit Facilities, buildings, utilities, and other facilities.
- (b) If Project Co wishes to make any amendment to the Construction Management Plan, Project Co shall:
  - (i) provide the Province's Representative with a report identifying the reasons for such amendment to the Construction Management Plan; and
  - (ii) submit to the Province's Representative for review in accordance with the Review Procedure a revised Construction Management Plan.

## **BROADWAY SUBWAY PROJECT PROJECT AGREEMENT** SCHEDULE 3: PROJECT SCHEDULE

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## APPENDIX A PROJECT SCHEDULE

Project Schedule Milestone	Date
Effective Date	August 28, 2020
Completion of Enabling Works for Third Party	The day that is 6 months prior to
Cellular and Wi-Fi Equipment	the Substantial Completion Date
Completion of Third Party Commercial Space	The day that is 5 months prior to
Requirements	the Substantial Completion Date
Smart Card and Faregates Work Target Date	The day that is 104 days prior to
	the Substantial Completion Date
Substantial Completion Target Date	November 27, 2025
Service Commencement Target Date	30 days after the Substantial
	Completion Date
Total Completion Target Date	The last day of the month which
	is the third complete calendar
	month to end after the month in
	which the Substantial Completion
	Date occurs
On-Time Performance Demonstration	The first anniversary of the
Completion Target Date	Service Commencement Date
TIDS Performance Demonstration Completion	The first anniversary of the
Target Date	Service Commencement Date