

SCHEDULE 7

DEVELOPMENT OF CONTRACT PRICE

SECTION A GENERAL

A.1 Capitalized Terms

A1.1 Capitalized terms used in this Schedule 7 have the meanings set out in the Development Phase Agreement, unless otherwise expressed in this Schedule 7.

- (a) **“Basis of Estimate”** has the meaning given in Section E.1(1)(c).
- (b) **“CIQS”** means the Canadian Institute of Quantity Surveyors.
- (c) **“Composite Rates”** means any rate or price described in this Schedule 7 derived from a combination of Resource Unit Rates and which, subject to this Schedule 7, may be used in the development of the Contract Price.
- (d) **“Cost Escalation Analysis”** has the meaning given in in Section C.6.
- (e) **“DBA Eligible Costs”** means those Eligible Costs described in Schedule 8 – Prices in the Draft Design Build Agreement.
- (f) **“Exclusions”** has the meaning given in Schedule 8 – Prices in the Draft Design Build Agreement.
- (g) **“Fee”** has the meaning given in Section D.2(2).
- (h) **“Implementation Phase Estimate”** has the meaning given in in Section D.4(2).
- (i) **“Implementation Phase Estimate Plan”** has the meaning given in in Section C.3(1).
- (j) **“IP Eligible Costs Estimate”** has the meaning provided in Section C.4.
- (k) **“Quantitative Risk Analysis”** or **“QRA”** has the meaning given in Section D.3(3).
- (l) **“Quantity Takeoff BIM Report”** has the meaning given in Section C.5(2).
- (m) **“Quantity Takeoff Drawings”** has the meaning given in Section C.5(1).
- (n) **“RACI”** means responsible, accountable, consulted, and informed.
- (o) **“Resource Unit Rates”** means any individual rate or price in this Schedule 7 for the supply of a single unit of labour, staff, goods, materials, plant, or equipment contemplated as an Eligible Cost and used in the development of the Contract Price.
- (p) **“Risk and Contingency”** has the meaning given in Section D.3(1).

- (q) “**Contract Price Report**” has the meaning given in Section E.1.
- (r) “**Contract Price Update Date**” has the meaning given in Section F.1(1).
- (s) “**Updated Contract Price**” has the meaning given in Section F.1(1).
- (t) “**Variance Analysis**” has the meaning given in Section C.7(1).
- (u) “**Working Group Estimate**” has the meaning given in Section C.1(1).
- (v) “**Working Group IP Estimate**” has the meaning given in Section C.4(1).

SECTION B DETERMINATION OF CONTRACT PRICE

B.1 Process for Determining Contract Price

- B1.1 This Schedule 7 applies to the Implementation Phase Estimate, and any estimates used in the development of the Implementation Phase Estimate, and the establishment of the Contract Price. For clarity, when requirements are set out that are applicable to the “Contract Price” in this Schedule 7, such requirements are also applicable to each of the estimates used in the development of the Implementation Phase Estimate.
- B1.2 The Contract Price, to be determined collaboratively by Development Partner and the City, shall be the aggregate of:
 - (a) an estimate of DBA Eligible Costs for the Design Builder and the Design Builder Parties determined in accordance with this Schedule 7;
 - (b) the Fee determined in accordance with Section D.2; and
 - (c) Risk and Contingency amounts determined in accordance with Section D.3.
- B1.3 For greater certainty, all costs and expenses related to, in respect of or arising out of Exclusions shall not constitute DBA Eligible Costs, and therefore, shall not form any part of the Contract Price.

SECTION C DETERMINATION OF IMPLEMENTATION PHASE ESTIMATE

C.1 General Principles

- C1.1 Each of the Preliminary Cost Estimate and Intermediate Cost Estimate will be segregated into separate Class 3 estimates consistent with AACE practices for each Working Group (each a “**Working Group Estimate**”) that corresponds with the applicable Working Group Technical Requirements.
- C1.2 In developing the Preliminary Cost Estimate, Intermediate Cost Estimate, and Working Group Estimates, updates to either of them, and the Implementation Phase Estimate for the Works to be performed under any Final Design Build Agreement on and following the Design Build Agreement Execution, Development Partner must:
 - (a) demonstrate value for money, which shall include:

- (i) benchmarking proposed DBA Eligible Costs against all relevant Resource Unit Rates and Composite Rates (adjusted where appropriate to record inflation allowances, including for escalation and indexation) to demonstrate that, so far as practicable in the circumstances, the proposed DBA Eligible Costs are not materially inconsistent with the benchmarks and are aligned with current industry best practices;
 - (ii) verifying all estimates of production output rates for labour, plant and equipment;
 - (iii) verifying all estimates of materials, including wastage allowances;
 - (iv) reasonability of procurement costs for subcontracting, including as a result of rigorous competitive procurements and market testing as required by the Draft Design Build Agreement; and
- (b) benchmarking of prices, allowance, and contingency amounts;
 - (c) use individuals with an appropriate level of knowledge, skill, and experience in estimating relevant infrastructure projects using industry recognized, repeatable, and defensible practices;
 - (d) uphold a high standard of professional and ethical integrity;
 - (e) except for Working Group IP Estimates, reflects the entire scope of the Works to be performed under any Final Design Build Agreement on and following Design Build Agreement Execution, including all the elements and activities necessary to complete the Works;
 - (f) clearly document all assumptions and exclusions;
 - (g) update the estimate information as new information becomes available including progression of design;
 - (h) prepare and separately identify any allowances for inflationary effects, including indexation;
 - (i) adopt a deterministic methodology from the Implementation Phase Estimate Plan reviewed by the City in accordance with Schedule 5 – Development Phase Submittal Development and Review Process by utilizing crew cost assemblies made up of independent labour and equipment; working together to perform a portion of the Works at a common production rate;
 - (j) utilize an estimating software (e.g., HCSS, Hard Dollar, Bid2Win, Timberline, etc.) to apply the crew cost method;
 - (k) apply construction sequence, staging, means and methods to select the best crew makeup;

- (l) utilize a trade format in a flat file which shall align with the WBS placeholders and their associated coding system and Master Format CSI 2018 divisions, assigned with six digit codes;
- (m) structure the cost elements within labour, equipment, material, and other resource categories in accordance with AACE Skills & Knowledge of Cost Engineering, 6th Edition and Appendix A including Cost Element Allocation Tables, and based on the following principles:
 - (i) detailing the bill of quantities, unit of measurement, labour-hour, equipment-hour, cost breakdown of labour, equipment, material, and other costs, unit cost and total cost; and
 - (ii) for the areas with minimal information, some allowances are permitted DBA Eligible Costs, following historical data records and benchmark to relevant historical projects.

C.2 Work Breakdown Structure

- C2.1 Development Partner shall collaborate with the City to develop the WBS that will be used for the development of the cost model and subsequent cost estimates.
- C2.2 The WBS shall represent the full scope of work for the Implementation Phase, broken down into a hierarchy of Work packages, used to organize the Project Schedule and the budgeted Schedule of Prices.
- C2.3 The WBS shall be organized by the defined structure as follows:
 - (a) Level 1: Project
 - (b) Level 2: major tasks:
 - (i) project management;
 - (ii) design;
 - (iii) construction;
 - (iv) commissioning; and
 - (v) post-construction;
 - (c) Level 3: by Area Code as defined in Section C.1.1.10 in the draft DBA Schedule 18 – Technical Requirements;
 - (d) Level 4: by CSI Division (17 Divisions as per draft DBA Schedule 18 – Technical Requirements, Appendix 18B – Specifications); and
 - (e) Level 5 and above: by specification section or other specific activities.

C2.4 Development Partner shall provide a written description of the Work to be done for each Work package in the WBS, which shall include:

- (a) a narrative of the Work to be performed;
- (b) a list of major milestones or deliverables; and
- (c) a list of information needed (if any) from other parties to perform the subject Work.

C2.5 The WBS shall be submitted to the City in accordance with Schedule 5 – Development Phase Submittal Review Process, and achieve a Submittal Endorsement of "Received" prior to Development Partner submitting the Implementation Phase Estimate Plan.

C.3 Implementation Phase Estimate Plan

C3.1 Prior to commencing the Working Group IP Estimate set out in Section C.4, Development Partner shall submit a plan for the development of the Working Group IP Estimates and the IP Eligible Costs Estimate (the "**Implementation Phase Estimate Plan**"), which shall:

- (a) include roles and responsibilities based on a RACI matrix, of the different individuals involved in the preparation of the Working Group IP Estimates and the IP Eligible Costs Estimate;
- (b) include key estimate development milestones in table format showing milestones of critical input and deliverables related to estimating;
- (c) include functional integration;
- (d) include checklists for each of the reviews of the Working Group Technical Requirements, material takeoffs, and crew mix/productivity;
- (e) include verification of the Working Group IP Estimates and the IP Eligible Costs Estimate;
- (f) include a milestone estimate plan; and
- (g) include an estimate methodology; and
- (h) include subcontractor management for the Implementation Phase; and
- (i) be in accordance with the WBS in a tree view and hierarchical formats.

(2) The milestone estimate plan included in the Implementation Phase Estimate Plan shall include the following components:

- (a) describe major project components and their quantities;
- (b) verify and explain estimate classification and estimate target accuracy;

- (c) describe the methodology for implementing an estimate in alignment with each estimate classification, including explanation of how the methodology would be utilized for the estimating exercise;
- (d) indicate all the required tools, their names, and functionality for the quantity takeoff and estimating that Development Partner is planning to use;
- (e) indicate the estimate format and its coding system which shall be aligned with the WBS;
- (f) describe the process of quantity takeoff, bill of material preparation, takeoff methodology (such as the method of measurement), and unit of measures for major items, and include a table of material waste factors (a percentage of material wastage) for key materials;
- (g) describe if Development Partner will be applying to benchmark using elements to similar historical projects, and if so then the benchmarking shall be included to demonstrate utilization of a systematic approach of comparing and validating the estimate against similar historical projects, in accordance with the principles set out in Section C.1(2)(a) and provide relevant benchmarking project or reference name; and
- (h) indicate the Resource Unit Rates representing the required commodity rates and their references in separate tables for labour, staff, goods, materials, plant, and / or equipment.

C.4 Development of an IP Eligible Costs Estimate

C4.1 Development Partner shall utilize each Working Group's scope of services, and Working Group Estimate updated in accordance with the Working Group Technical Requirements, to advance each Working Group Estimate to a Class 2 estimate by:

- (a) review the Working Group's progress on the Working Group Technical Requirements;
 - (b) material take-off and bill of material;
 - (c) review material takeoff and allowances;
 - (d) crew mix, unit rate, and productivity;
 - (e) review unit cost and labour hours;
 - (f) perform a Cost Escalation Analysis;
 - (g) perform a Variance Analysis; and
 - (h) obtain peer review the foregoing,
- (collectively, the "**Working Group IP Estimate**").

- (2) Upon completion of all Working Group IP Estimates, Development Partner shall develop a Class 2 estimate by:
- (a) consolidating the Working Group IP Estimates and incorporate into the Intermediate Design Submittal;
 - (b) estimating any DBA Eligible Costs not included in the Working Group IP Estimates based on the initial Implementation Phase Schedule;
 - (c) reviewing consolidated material takeoffs, allowances and assumptions;
 - (d) reviewing overall pricing basis alignment;
 - (e) performing a Cost Escalation Analysis; and
 - (f) performing a Variance Analysis,
- (collectively, the “**IP Eligible Costs Estimate**”).

C.5 Quantity Takeoff

- C5.1 In developing the Working Group IP Estimate and reviewing IP Eligible Costs Estimate Development Partner shall develop a quantity takeoff based on AACE or CIQS method of measurements using a relevant takeoff structure (e.g., on-screen takeoff, Bluebeam, Cost X, etc.) and transfer the result into a bill of quantities in Microsoft Excel format with each takeoff line item associated with the drawing number and marked up in Adobe PDF format (“**Quantity Takeoff Drawings**”).
- C5.2 If quantity takeoffs are developed through the building information modeling system, then Development Partner shall describe the process and generate a direct report from the relevant software (“**Quantity Takeoff BIM Report**”) for submission as part of the Contract Price Report.

C.6 Cost Escalation Analysis

- C6.1 In developing the Working Group IP Estimate and IP Eligible Costs Estimate Development Partner shall perform a cost escalation analysis, and prepare a report of same, as follows:
- (a) calculate and identify expected increases to the DBA Eligible Costs across each cost category on a time scale as a separate line item (in a cash flow format)
 - (i) in each Working Group IP Estimate based on when such costs are scheduled to occur in most recent update to the Target Implementation Phase Schedule to address cost escalation over time; and
 - (ii) in the IP Eligible Costs Estimate based on when such costs are scheduled to occur in Implementation Phase Schedule to address cost escalation over time;

- (b) date range escalation shall be calculated based on each cost item's scheduled earliest start and finish dates;
- (c) Development Partner may adopt the period spending method to break the spending into time increments (quarterly or annual basis); and
- (d) the impact of escalation will be considered in the risk and contingency analysis in Section D.3,

(collectively, the "**Cost Escalation Analysis**").

C.7 Variance Analysis

C7.1 In developing the Working Group IP Estimate and IP Eligible Costs Estimate, Development Partner shall perform a cost escalation analysis, and prepare a report of same, by identifying project scope, quantity and cost variance between:

- (a) each of the first Working Group Estimates and the corresponding Working Group IP Estimates; and
- (b) Preliminary Cost Estimate approved in the Preliminary Design Submittal and the IP Eligible Costs Estimate;

("Variance Analysis").

SECTION D DETERMINATION OF FEE AND RISK AND CONTINGENCY

D.1 Corporate Overhead and Profit Rates

- D1.1 The Corporate Overhead payable by the City to the Design Builder as part of the Contract Price under the Design Build Agreement is the amount equal to the rates given in Schedule 8 – Prices in the Draft Design Build Agreement.
- D1.2 The Profit payable by the City to the Design Builder under the Design Build Agreement is the amount equal to the rates given in Schedule 8 – Prices in the Draft Design Build Agreement.

[Note to Proponents: The percentages in this Section will be populated prior to the Effective Date of the DPA, using the rates provided with the Preferred Proponent's Financial Submission.]

D.2 Determination of Fee

- D2.1 Development Partner must use the percentage for Corporate Overhead and percentage for Profit set forth in Section D.1 to determine the Corporate Overhead and Profit components of the Contract Price.
- D2.2 The fee ("**Fee**") shall be an amount equal to the sum of (i) the Corporate Overhead component of the Contract Price, and (ii) the Profit component of the Contract Price.

D2.3 For clarity, the disbursement of the Fee shall be incorporated as part of the Contract Price payable by the City to the Design Builder, in accordance with Schedule 9 – Progress Payments of the Draft Design Build Agreement.

D.3 Determination of Risk and Contingency

D3.1 To determine the risk and contingency (“**Risk and Contingency**”) amounts, Development Partner shall collaborate with the City to:

- (a) develop and update a risk register on an ongoing basis throughout the DPA Term in accordance with Schedule 3 – Development Phase Scope of Work; and
- (b) provide replicable rationales for all quantitative assessments, including the probability, schedule impact and cost impact of each risk item. Development Partner shall provide a level of detail equivalent to a minimum Class 3 estimate to support the cost impact of each risk item and a level of detail equivalent to a minimum Level 3 schedule assessment for the schedule impact of each risk item, or a level of detail as otherwise agreed between Development Partner and the City.

D3.2 Where applicable, each risk item in the risk register shall provide a reference to a DBA Eligible Cost pursuant to Appendix A and Appendix B to this Schedule 7.

D3.3 The quantitative risk analysis shall only be performed on items that are DBA Eligible Costs and shall be conducted as follows (“**Quantitative Risk Analysis**” or “**QRA**”):

- (a) use a Monte Carlo simulation to develop the project risk profile which integrates the IP Eligible Costs Estimate uncertainty, the initial Implementation Phase Schedule uncertainty and the Project risk events, and which includes:
 - (i) capital cost and schedule contingencies selected at 80% confidence level (P80);
 - (ii) key cost and schedule risk drivers;
 - (iii) probability of achieving the deterministic cost and schedule;
 - (iv) project risk probability distribution for both cost and schedule;
 - (v) and using the following input for commencing the QRA;
 - (vi) Implementation Phase Schedule organized by WBS;
 - (vii) Basis of Implementation Phase Schedule Report;
 - (viii) time variable: cost that changes with the change in schedule duration i.e. level of effort activities, variable cost, etc.;
 - (ix) Basis of Estimate;
 - (x) updated Project risk register;

- (b) benchmark results of the analysis against the AACE guidelines; and
- (c) to determine the risk contingency amounts to be included within the Contract Price, Development Partner shall include the QRA output at the “P80” confidence level.

D3.4 Development Partner shall prepare and submit a report on the QRA as part of the Contract Price Report.

D3.5 The Risk and Contingency amounts shall not include any provision for risks that are eligible for a compensation in accordance with Section K (Relief Events) of the Draft Design Build Agreement.

D.4 Peer Review

D4.1 The Parties shall jointly retain a third party with the required relevant experience to review and comment on the Risk and Contingency and the IP Eligible Costs Estimate.

D4.2 Development Partner shall update:

- (a) the IP Eligible Costs Estimate to address any comments received from the peer review (the “**Implementation Phase Estimate**”); and
- (b) the Risk and Contingency to address any comments received from the peer review.

SECTION E CONTRACT PRICE REPORT

E.1 Contract Price Report

E1.1 As part of the Preliminary Design Submittal and the Intermediate Design Submittal, Development Partner shall submit a basis of estimate report that includes the following information the following sections:

- (a) Section 1 – Executive Summary - identify the Preliminary Cost Estimate, Intermediate Cost Estimate, or Contract Price (as applicable), and its Implementation Phase Estimate, Corporate Overhead, Profit and Risk and Contingency components;
- (b) Section 2 – Quantity Takeoff Drawings and/or Quantity Takeoff BIM Report as applicable;
- (c) Section 3 – completed checklists for each of the reviews of the Working Group’s Technical Requirements, material takeoffs, and crew mix/productivity in accordance with the Implementation Phase Estimate Plan (“**Basis of Estimate**”);
- (d) Section 4 – estimate summary level by WBS (summarized by WBS levels 2, 3, and 4);
- (e) Section 5 – estimate summary level by *Master Format CSI 2018* (and any required format such as elemental for building components);

- (f) Section 6 – estimate detailed level - flat file (MS Excel);
- (g) Section 7 – estimating software native file (if applicable);
- (h) Section 8 – Resource Unit Rates, Composite Rates, supplier's/subcontractor's actual quotes;
- (i) Section 9 – subcontractors, suppliers and vendor's evaluation sheets including the preferred quotation;
- (j) Section 10 – Cost Escalation Analysis of the IP Eligible Costs Estimate;
- (k) Section 11 – Variance Analyses;
- (l) Section 12 – QRA Report and updated risk register; and
- (m) Section 13 – identify how Exclusions are to be addressed,
(the "**Contract Price Report**").

E.2 City's Discretion

- E2.1 No provision of this Schedule 7 shall limit or prejudice the City's rights in Section E.6 of the DPA, notwithstanding the participation of the City and its advisors in the Contract Price development process, including any review, act, omission, instruction, comment, consent, acknowledgement, approval or agreement by the City, in relation to the development and finalization of the final proposed Contract Price.

SECTION F CONTRACT PRICE UPDATES

F.1 Process for Updating Contract Price

- F1.1 The Parties agree that no earlier than five Business Days prior to the Design Build Agreement Execution Target Date (the "**Contract Price Update Date**"), the Contract Price shall be adjusted by the Parties on one occasion to reflect, without duplication, only the following amounts:
- (a) if the Parties agree on any Development Partner DBA Requirements pursuant to Schedule 3 – Development Phase Scope of Work, then the risk register and the Contract Price Report shall be adjusted, if applicable, and the Contract Price shall be adjusted upwards by an amount equal to the anticipated Eligible Costs, Corporate Overhead and Profit of those Development Partner DBA Requirements that were scheduled to be performed by Development Partner in the Development Partner Scope of Work but will not be performed by Design Build Agreement Execution and such costs shall be set out in the most recent Three-Month Eligible Cost Plan submitted by Development Partner subject to and in accordance with Schedule 8 – Development Phase Payment or in any other relevant information and documentation provided by Development Partner to the City pursuant to the DPA setting out such amount; and

- (b) if the Parties agree on any addition to the Development Partner Scope of Work based on the scope of work in the Draft Design Build Agreement, then the risk register and the Contract Price Report shall be adjusted, if applicable, and the Contract Price shall be adjusted downwards by an amount equal to the aggregate of:
 - (i) the Eligible Costs, Corporate Overhead and Profit paid or payable by the City subject to and in accordance with Schedule 8 – Development Phase Payment in respect of the additional Development Partner Scope of Work by the Contract Price Update Date; and
 - (ii) the anticipated Eligible Costs, Corporate Overhead and Profit otherwise estimated to be payable by the City to Development Partner in respect of the additional Development Partner Scope of Work in the most recent Three-Month Eligible Cost Plan submitted by Development Partner subject to and in accordance with Schedule 8 – Development Phase Payment by the Contract Price Update Date or in any other relevant information and documentation provided by Development Partner to the City pursuant to the DPA setting out such amount,

(the “**Updated Contract Price**”)

- F1.2 By no later than 10 Business Days prior to the Contract Price Update Date, Development Partner shall, acting reasonably, submit to the City in writing its proposed Updated Contract Price for the City’s review in accordance with Schedule 5 – Development Phase Submittal Development and Review Process, together with all supporting details, calculations, information and documentation necessary for the City to verify, understand and agree to such Updated Contract Price, including for the City to verify that the Updated Contract Price only includes the adjustments expressly described in Section F.1(1). Without limiting any other right of the City under the DPA, Development Partner shall, upon request, promptly provide to the City any additional details, calculations and other information and documentation requested by the City to allow for such verification and understanding, for an agreement to occur.
- F1.3 If the Parties are unable to agree on the Updated Contract Price within 5 Business Days of Development Partner’s submission of the Updated Contract Price pursuant to Section F.1(2), then the Leadership Team shall refer the matter as an Unresolved Issue in accordance with Schedule 2 – Development Phase Governance.
- F1.4 For clarity, it is the Parties intention that the DPA Design Works will continue following submission of the Intermediate Design Submittal as part of the Development Partner Works. Development Partner shall not be entitled to an upward adjustment to the Contract Price solely on the basis that the DPA Design Works have progressed between the date of the submission of the Intermediate Design Submittal and the date before Design Build Agreement Execution unless Development Partner would otherwise be entitled to a Relief Event under the Draft Design Build Agreement.