

SCHEDULE 10

REVIEW PROCEDURE

ARTICLE 1 WORKS SUBMITTALS

1.1 The provisions of this Schedule 10 shall apply to the Design Development Submittals, the Construction Document Submittals, the Design Data and any and all items, documents and anything else required or specified by the Project Agreement, including all Works Submittals listed in Appendices A and B to this Schedule 10, in respect of:

- (a) the East Works to be submitted to, reviewed or otherwise processed by the City in accordance with the Review Procedure prior to East Substantial Completion, or after East Substantial Completion in respect of the completion of East Minor Deficiencies, including any and all subsequent revisions, amendments and changes thereto; and
- (b) the West Works to be submitted to, reviewed or otherwise processed by the City in accordance with the Review Procedure prior to West Substantial Completion, or after West Substantial Completion in respect of the completion of West Minor Deficiencies, including any and all subsequent revisions, amendments and changes thereto.

(collectively and individually, “Works Submittal” or “Works Submittals” as applicable in this Schedule 10).

1.2 For clarity, the provisions of this Schedule 10, including any deadlines for submission or review set out herein, shall not apply to any processing or review of any Permits, Licences, Approvals and Agreements.

1.3 Subject to Article 1.2, if the City fails to meet the timelines set out in this Schedule 10 with respect to its review of any Submittals, including due to delay caused by the City Design Team, RTG, NCC or MTO, such failure shall be deemed to be a failure by the City to comply with the timelines set out in this Schedule 10.

1.4 In general, Works Submittals shall consist of the following. Specific requirements for each of these Work Submittals are detailed further in Appendices A and B.

- (a) Design Development Submittals:
 - (i) Prior to the preparation of each Pre-Final Design Development Submission, DB Co shall develop a basis of design report for each discipline, based on the Project Agreement and PSOS requirements. The basis of design report shall describe the technical approach planned for the Project as well as the technical requirements, security mitigation and measures to be employed, design codes and parameters to be used;
 - (ii) Pre-Final Design Development (PFDD), which is the stage of design development where the design details of the relevant Works Submittal are established and drawings and specifications for construction have been

- developed but are not yet fully finalised;
- (iii) Final Design Development (FDD), which is the stage of design development where the design details of the relevant Works Submittal are finalised and the construction drawings and construction specifications for the designed element are also finalised.
- (b) Construction Document Submittals;
 - (c) other reports, studies, matrices and plans listed in this Schedule 10 and in Appendices A and B to this Schedule 10;
 - (d) other reports, studies and plans identified in the relevant sections of the Project Agreement; and
 - (e) Works Schedules in accordance with Schedule 12 – Works Scheduling Requirements and as per Article 3.13.
- 1.5 DB Co shall be responsible for determining any and all necessary Works Submittals, as specified in the relevant sections of the Project Agreement.
- 1.6 Other reports, studies and plans shall be submitted as follows:
- (a) DB Co shall be responsible for determining the timing of the preparation of reports, studies and plans required in the preparation of the PFDD, FDD and Construction Document Submittals, unless timing of these reports, studies and plans are identified in this Schedule 10 or in other relevant sections of the Project Agreement. DB Co shall include the timing and submission sequence of all reports, studies and plans which will inform the Design Development Submittals in the schedule of Works Submittals pursuant to Section 11.2(b)(vi) of the Project Agreement. DB Co shall prepare a minimum of one hard copy and one electronic upload of submissions of reports, studies and plans for review by the City as follows:
 - (i) Draft format; and
 - (ii) Final format (signed and sealed).
 - (b) DB Co shall be responsible for preparing and submitting additional updated submissions of reports, studies and plans, if the validity of such is altered due to design changes or if more frequent submissions are identified in this Schedule 10 or in other relevant sections of the Project Agreement.
- 1.7 Compliance Verification & Validation Matrix:
- (a) DB Co shall use the Requirements Management tool to report on compliance with the Output Specifications and other requirements in the form of a Compliance Verification & Validation Matrix. The Compliance Verification & Validation Matrix shall provide line-by-line reporting of all applicable requirements and provide full traceability between requirements and compliance demonstration, including preliminary and final design references, quality assurance & control, testing &

commissioning (including but not limited to FAT, PICO, SAT, SIT, and system-wide testing); and

- (b) DB Co shall submit the Compliance Verification & Validation Matrix in accordance with this Schedule 10 as part of the Basis for Design submittal, at the Pre-Final Design Development stage, the Final Design Development stage, after system-wide testing, prior to trial running and at final completion.

1.8 Design review workshops

- (a) DB Co shall schedule and coordinate design review workshops in advance of issuing Pre-Final Design Development Submittals;
- (b) The DB Co Representative shall arrange the design review workshops in consultation with the City Representative;
- (c) The Parties shall cooperate to develop a reasonable schedule for the design review workshops and shall incorporate such schedule into the Current PBS;
- (d) DB Co shall circulate to the City Representative an agenda for each of the design review workshops no later than 5 Business Days prior to the relevant design review workshop;
- (e) The design review workshops shall be held in person in the City of Ottawa, Ontario, except where otherwise agreed by the Parties, acting reasonably; and
- (f) In advance of a design review workshop, DB Co may submit to the City Design Team for comment any interim drafts of any designs or plans required under this Project Agreement, which submissions shall be used to inform the City on the development of New City Infrastructure and New MTO Infrastructure design and provide an opportunity for dialog on compliance with the requirements of the Project Agreement. For greater certainty, interim submissions shall be informal and shall not be reviewed in accordance with Schedule 10 - Review Procedure.

1.9 Design working groups

- (a) In order to discuss and obtain input to the design development, DB Co and the Design Team shall hold design working groups with the City and the City Design Team upon the following terms:
 - (i) DB Co shall propose, in consultation with the City Representative, a logical breakdown of design disciplines or submittals that should each be the subject of individual monthly or biweekly design working groups as mutually agreed;
 - (ii) the City and DB Co shall mutually agree if multiple design disciplines or submittals should be discussed in a particular design working group to benefit a wholesome discussion on overlapping design matters;

- (iii) each design working group shall be held monthly or biweekly, in the City of Ottawa, unless the City agrees otherwise in writing;
- (iv) the Parties shall cooperate to develop a reasonable schedule for the design working groups and shall incorporate such schedule into the Current PBS;
- (v) DB Co shall circulate to the City and the City Design Team an agenda for each of the design working groups no later than 10 Business Days prior to the relevant design working groups held on a monthly basis and 5 Business Days prior to the relevant design working groups held on a biweekly basis;
- (vi) in advance of a design working groups, DB Co may submit to the City Design Team any interim drafts of any designs or plans required under this Project Agreement, which submissions shall be used to inform the City on the development of New City Infrastructure and New MTO Infrastructure design and provide an opportunity for dialog on compliance with the requirements of the Project Agreement. For clarity, these submissions shall be informal and shall not be reviewed in accordance with Schedule 10 - Review Procedure;
- (vii) the design working groups shall be held in person, with attendance from the relevant DB Co and City subject matter experts, except where otherwise agreed by the Parties, acting reasonably;
- (viii) DB Co shall maintain minutes of the design working groups and, within 5 Business Days after each design working group, DB Co shall provide to the City and the City Design Team a copy of the minutes, together with a copy of any notes, drawings, or diagrams relevant to the design working group; and
- (ix) the City and DB Co agree that the subject matter of the design working groups shall not be regarded as Submittals to which Schedule 10 - Review Procedure applies, and that the City shall not be bound by the input provided in connection with the design working group.

ARTICLE 2 SCHEDULE FOR WORKS SUBMITTALS

- 2.1 DB Co shall schedule the Review Procedure Activities, including the submission dates for all Works Submittals and the City review period in accordance with this Schedule 10.
- 2.2 The Works Schedule and any amendment to the Works Schedule shall allow:
 - (a) a period of 15 Business Days (or such longer period as the Parties may agree) from the date of receipt for the City's review of and response to each Works Submittal for all Works;
 - (b) a period of 20 Business Days (or such longer period as the Parties may agree) from the date of receipt for the City's review of and response to each Works Submittal

containing elements of the Works to be constructed within or adjacent to NCC Lands. Refer to the Lands Table in Schedule 20 – Lands for the extent of these Lands; or

- (c) a period of 20 Business Days (or such longer period as the Parties may agree) from the date of receipt for the City’s review of and response to each Works Submittal containing elements of New MTO Infrastructure,

which period of time may be subject to adjustment, as agreed upon with the City.

2.3 DB Co shall submit all Works Submittals no later than the dates identified in the Current PBS, as defined in Schedule 12 – Works Scheduling Requirements. The City Representative shall review and respond to each Works Submittal in accordance with the review periods set forth in Article 2.2 of this Schedule 10 – Review Procedure or as otherwise agreed to between the Parties.

2.4 If, at any time:

- (a) a Revised PBS is under review by the City, then the City shall be afforded an additional period of time, not to exceed an additional ten Business Days, for processing such Works Submittals;
- (b) DB Co submits a volume of Works Submittals not contemplated by the Current PBS, then the City Representative shall, within five Business Days of receipt of such Works Submittal or Works Submittals, provide DB Co with a reasonable estimate of the time necessary for processing such Works Submittal or Works Submittals which estimate DB Co shall take into account for the purposes of Schedule 12 – Works Scheduling Requirements; or
- (c) a Works Submittal was, or Works Submittals were, received for review later than indicated in the Current PBS, such that the City Representative cannot review the Works Submittal or Works Submittals within the time permitted in the Current PBS, then the City shall be afforded an additional period of time, not to exceed an additional five Business Days, for processing such Works Submittals.

2.5 Documentation or data that has been submitted, deemed compliant, and service proven for the Existing Confederation Line may be reused and shall be resubmitted for the purposes of the Confederation Line Extension project, and will be considered compliant, except for such changes as may be necessary to satisfy the requirements of the Confederation Line Extension.

ARTICLE 3 GENERAL REQUIREMENTS FOR WORKS SUBMITTALS

3.1 Unless otherwise specified by the City Representative, DB Co shall issue all Works Submittals to the City in the format described in Appendices A and B, and one printed copy of each Works Submittal to the Independent Certifier.

3.2 DB Co shall be responsible for creating and maintaining an Electronic Data Management System (EDMS), as a tracking log to monitor, as a minimum, the approval of submittals and the resolution of comments. This system shall:

- (a) be used as a repository for all electronic submittal uploads and document control;
 - (b) be in place and operational within 30 days after Financial Close;
 - (c) be deemed reasonably acceptable to the City prior to implementation;
 - (d) follow the City IT policy and address cyber security issues with supporting mitigation;
 - (e) as a minimum comprise the following:
 - (i) a cloud-based single platform, compatible with City technology security policies for cloud storage, which provides an easily configurable solution;
 - (ii) user group security and restricted authorization function;
 - (iii) browsing by project, folder or file name with drag and drop function;
 - (iv) collaboration functions with the ability to electronically approve and stamp documents;
 - (v) text searchable functions for PDF and native files;
 - (vi) seamless integration;
 - (vii) audit trail;
 - (viii) pre-defined workflow & quality management systems;
 - (ix) read-only, real-time access for the City Representative and their nominated personnel;
 - (x) version control and notification capability;
 - (xi) analytics and reporting function; and
 - (xii) a review function with customizable mark-up tools.
 - (f) undergo routine system shutdowns and/or maintenance outside working hours, if necessary;
- 3.3 DB Co shall, at its own cost and risk, compile and maintain a Review Procedure Activities Register, to be uploaded to the EDMS as detailed in Appendix A, to track the status of each Works Submittal through every stage of preparation, submission, and review by the City, and approval by the applicable third party. DB Co shall submit documentation on the proposed design, functionality, and usage of the Review Procedure Activities Register to the City Representative in accordance with Schedule 10 – Review Procedure no later than Financial Close. The Review Procedure Activities Register shall:
- (a) be updated on a daily basis by DB Co and be accessible in real time by the City, any

- other entity as requested by the City and DB Co, through the EDMS, unless otherwise permitted by the City;
- (b) be operational no later than 30 days after Financial Close;
 - (c) include identification of the following:
 - (i) the submittal date and contents of all Works Submittals;
 - (ii) the date of receipt and content of all returned Works Submittals;
 - (iii) status of comments on all Work Submittals in accordance with Article 4.1;
 - (iv) vulnerability or security breaches;
 - (v) tracking ID's (in a format reasonably acceptable to the City) supporting the requirements of Article 3.8.
 - (d) include a tracking log to monitor the resolution of comments.
- 3.4 All Works Submittals shall be in English.
- 3.5 All Works Submittals required by the Project Agreement and/or by Applicable Law to be signed or sealed by persons with professional designations, registered in the Province of Ontario (including, where applicable, by registered professional engineers, professional geoscientists, architects or landscape architects) shall be so signed and sealed, unless the Works Submittal is being submitted in Draft format in accordance with Article 1.6(a)(i) of this Schedule 10, or as an Interim submission in accordance with Article 1.8(f) of this Schedule 10.
- 3.6 All Works Submittals shall:
- (a) include copies of all documents to be reviewed;
 - (b) be uploaded to the EDMS and include an electronic file-naming convention reasonably acceptable to the City; and
 - (c) clearly identify the purpose of the Works Submittal, DB Co's proposed course of action relating to the Works Submittal and the Project Operations that are the subject of the Works Submittal.
- 3.7 All Works Submittals shall, where applicable, refer to and be in accordance with the relevant provisions of the Output Specifications, any other applicable Schedule to the Project Agreement, and to any Design Data that has previously been subject to review.
- 3.8 Each Works Submittal shall be clearly identified as a Works Submittal and shall be delivered with appropriate covering documentation, which shall include:
- (a) a summary table which lists all revisions or changes from previous Works Submittals; and

- (b) a list of all attached Works Submittals and for each Works Submittal;
 - (i) identification of whether the Works Submittal contains System Infrastructure, New Municipal Infrastructure, New MTO Infrastructure, and elements of Works on or adjacent to NCC Lands.
 - (ii) the document number(s) or drawing number(s);
 - (iii) revision numbers (if applicable);
 - (iv) document or drawing title(s);
 - (v) name of entity that prepared the Works Submittal;
 - (vi) name and signature of the Design Manager and other Key Individual(s) responsible for content of the Works Submittal;
 - (vii) quality control documentation in accordance with Schedule 11 – Integrated Management System Requirements;
 - (viii) the Works Submittal history, including reviewer and checker initials, date and delivery information, log number of all previous submissions of that Works Submittal, Project Agreement provisions, comments from reviewers from the previous Works Submittal, all outstanding comments, and responses to addressing those comments, all submitted in a format reasonably acceptable to the City; and
 - (ix) identification of any previous Works Submittal superseded by the current Works Submittal.

- 3.9 To facilitate the City’s distribution of Works Submittals to the NCC and the MTO, all Works Submittals that are to be reviewed by the NCC, or MTO shall be separated accordingly and submitted individually.

- 3.10 Each Works Submittal shall be organized into relevant sections. Each Work Submittal shall contain pertinent correspondence, shall be arranged by subject matter in chronological order, and shall include the final calculations, reports and backup information. All Works Submittals shall include, without limitation, copies of all final approvals, design reports, correspondence and calculations, in both electronic and hard copy.

- 3.11 [Not used].

- 3.12 Issued For Construction Works Submittals
 - (a) Construction Document Submittals submitted in accordance with this Schedule 10 – Review Procedure and assigned comments “NO COMMENT” or “MINOR COMMENT” with all of the comments resolved, shall become Issued For Construction and DB Co shall stamp them as “Issued For Construction”. Works Submittals used for the construction of any part or parts of the Project prior to being entitled to proceed, as noted above, shall not be stamped as Issued For Construction.

- (b) DB Co shall submit copies of all drawings that are Issued For Construction, together with manuals and instructions, to the City Representative and to the Independent Certifier.
- (c) Major revisions to Issued For Construction documents shall be submitted for review as Construction Document Submittals, being stamped “Issued For Construction” upon being entitled to proceed in accordance with this Section 10 – Review Procedure. For minor revisions to Issued For Construction documents, DB Co shall notify the City (which notice shall include appropriate drawings/revisions) but is not required to submit re-issued plans or reports, provided the City reserves the right to treat minor revisions as a major revision and require submission at any time several minor revisions have been made, or if the City determines in its sole discretion that a minor revision is a major revision. Issued For Construction documents are required for the certification of construction detailed in Appendices A and B of this Schedule 10.
- (d) In the case of artwork supply and fabrication, DB Co shall, prior to issuance, submit all related tender packages for review of compliance by the City.

3.13 Works Schedule Re-baseline Submittals

- (a) DB Co shall prepare Works Schedules re-baselines in accordance with Schedule 12 – Works Scheduling Requirements. DB Co shall submit the Works Schedules re-baselines for review in accordance with this Schedule 10.
- (b) All non-draft submissions shall include DB Co Representative’s dated signature on the front cover of each document.
- (c) All Works Schedules submitted to the City shall be submitted in two electronic file formats. The first format shall be in the native file format of the software used to generate and manage the Works Schedules, which shall be the exported .XER file for the latest version of Primavera Professional Project Management (PPM). The second format shall be a word-searchable high resolution colour PDF version. Upon City’s request, DB Co shall provide the details of the software and any additional software plug-ins used by DB Co, a copy of any templates, and the details for any software settings it has used in its scheduling software, such as calendar settings, user and administrative preferences, schedule settings, and any other information required to enable the City to replicate the Works Schedules submitted by DB Co using the native file formats provided by DB Co.
- (d) At each submission, DB Co shall provide at least two hardcopies of the PBS printed in colour in a reasonable scale and on an appropriate paper size. DB Co shall submit one .XER file used to generate the Works Schedule re-baseline and the resultant PDF.
- (e) All tabular information including numerical data or calculations shall be submitted in two electronic file formats. The first format shall be in the Microsoft Excel file format that would allow the City to review formulas and manipulate the data for the purpose of evaluation and the second format shall be a high resolution PDF version.

- (f) The filename of each of the electronic files submitted shall indicate the project name acronym, schedule type, revision number and the schedule status date in the format ‘YYYYMMDD’ - e.g. PBS-4 for Confederation Line East shall be named “CLE PBS-4 – 20180731”.
- (g) The requirements of Article 4 shall apply to all PBS Submittals.

ARTICLE 4 COMMENTS

- 4.1 The City Representative shall review and respond to each Works Submittal in accordance with the time periods specified in Article 2.2. The City Representative shall return Works Submittals to DB Co with a copy to the Independent Certifier and assign one of the following four comments:
 - (a) “NO COMMENT”;
 - (b) “MINOR COMMENT”;
 - (c) “MAJOR COMMENT”;
 - (d) “CRITICAL COMMENT”.
- 4.2 The comment “NO COMMENT” will be assigned to those Works Submittals that, in the opinion of the City Representative, generally conform to the requirements of the Project Agreement, recognising the degree of design development. DB Co shall comply with and implement such Works Submittals.
- 4.3 The comment “MINOR COMMENT” will be assigned to those Works Submittals that, in the opinion of the City Representative, generally conform to the requirements of the Project Agreement, recognising the degree of design development, but in which non-material deficiencies have been found by the City Representative’s review. DB Co shall correct these Works Submittals in the submission immediately subsequent, and shall comply with and implement such Works Submittals after correction, including in accordance with the comments. If the City Representative assigns to a Works Submittal the additional comment “RE-SUBMIT”, then,
 - (a) DB Co shall correct and re-submit such Works Submittal, in its entirety and at its own cost, to the City Representative no later than 20 Business Days after the comment has been provided to DB Co, or as agreed between DB Co and the City Representative and as set out in writing.
 - (b) If at any time it is discovered that DB Co has not corrected the deficiencies on Works Submittals stamped “MINOR COMMENT”, then DB Co will be required to modify the Works Submittals and Project Operations as required to ensure that the Works comply with the Output Specifications, any other applicable Schedule to the Project Agreement, and the DB Co Proposal Extracts and DB Co may be required, at the City Representative’s discretion, to resubmit the relevant Works Submittals.
 - (c) In such circumstances the City Representative shall act promptly in considering

whether such deficiencies have been corrected. At the City Representative's discretion, comments addressed as "MINOR COMMENT" that have not been addressed in the subsequent submission may be escalated to "MAJOR COMMENT" or "CRITICAL COMMENT".

- (d) No extension of time will be given or additional compensation paid in respect of any such modification or re-submittal.
- 4.4 The comment "MAJOR COMMENT" or "CRITICAL COMMENT" will be assigned to those Works Submittals that, in the opinion of the City Representative, contain significant deficiencies or do not generally conform to the requirements of the Project Agreement, including this Schedule 10.
- (a) DB Co shall correct and re-submit these Works Submittals within 20 Business Days after the comment has been provided to DB Co, or such other time period, as agreed between DB Co and the City Representative and as set out in writing.
 - (b) The City Representative will then review such re-submitted Works Submittals and assign a comment to the corrected Works Submittal. The Works Submittals shall be corrected, revised and resubmitted, in their entirety, as often as may be required to obtain a comment that permits DB Co to proceed.
 - (c) No extension of time will be given or additional compensation paid in respect of any such modification or re-submittal. In addition to the above, a Works Submittal with a "CRITICAL COMMENT" comment will be a Proceeding At Risk Matter in accordance with Section 14.6(a) of the Project Agreement.
- 4.5 Where the City Representative issues the comment "MINOR COMMENT", "MAJOR COMMENT" or "CRITICAL COMMENT", the City Representative shall provide reasons for the comment, referencing the particulars of the Section(s) of the Project Agreement that the Works Submittal fails to satisfy. DB Co shall schedule a meeting between the DB Co Representative and the City Representative to discuss the resolution of "MAJOR COMMENT" and "CRITICAL COMMENT" comments. At the City Representative's discretion, a meeting may be requested to resolve "MINOR COMMENT" comments. The City Representative shall not address the following in their comments:
- (a) spelling and/or grammar unless the design intent could be misinterpreted through such matters; and
 - (b) personal preferences regarding (i) design approach, (ii) construction methodology and/or (iii) selection of materials.
- 4.6 If, at any time after assigning any comment to a Works Submittal, the City Representative or DB Co discovers any significant deficiencies or any failure to conform to the requirements of the Project Agreement, the City Representative may revise the comment assigned to any Works Submittal. If the Parties agree or it is determined in accordance with Article 5 of this Schedule that the revised comment is correct, DB Co shall make all such corrections to the Works Submittals and the Project Operations. No extension of time will be given or additional compensation paid in respect of any such modification or re-submittal.

- 4.7 For the purpose of facilitating and expediting the review and correction of Works Submittals, the City Representative and the DB Co Representative shall meet, as may be mutually agreed, to discuss and review any outstanding Works Submittals and any comments thereon.
- 4.8 Where a Works Submittal is voluminous, the City Representative at his or her discretion may elect to stamp only the cover page or first sheet of the Works Submittal with the appropriate comment, if any, and return to DB Co the cover page or first page together with individual pages or sheets on which comments are made, together with an explanation of the status of all pages not returned to DB Co. Any pages returned without such an explanation as to their status shall be deemed to be “NO COMMENT” by the City.
- 4.9 In lieu of returning a Works Submittal, the City Representative may, by letter, notify DB Co of the comment assigned to the Works Submittal and if such comment is “MINOR COMMENT”, “MAJOR COMMENT” or “CRITICAL COMMENT”, then the notification shall contain comments in sufficient detail for DB Co to identify the correction sought.
- 4.10 At the City Representative’s discretion, DB Co may be requested to attend a meeting to discuss the resolution of any unresolved comments.

ARTICLE 5 DISPUTES

- 5.1 If DB Co disputes any act of the City or the City Representative in respect of a Works Submittal under this Schedule 10, DB Co shall promptly notify the City Representative and the Independent Certifier of the details of such Dispute and shall submit the reasons why DB Co believes a different comment should be assigned, together with appropriate supporting documentation. The City Representative shall review the Works Submittal, the reasons and supporting documentation and within five Business Days after receipt thereof shall either confirm the original comment or notify DB Co of a revised comment. If the City Representative confirms the original comment, DB Co may request that the Independent Certifier resolve the Dispute and render a decision within five Business Days of such request.
- 5.2 If either Party is not satisfied, acting reasonably, with the resolution of the Independent Certifier, subject to Article 10.2, either Party may refer the matter for determination in accordance with Schedule 27 - Dispute Resolution Procedure.
- 5.3 Notwithstanding the provisions of Articles 5.1 and 5.2, the City Representative may direct that DB Co revise the Works Submittals in accordance with the comments of the City Representative and proceed to perform and complete the Works on the basis of such revised Works Submittals. For clarity, such direction shall be considered a Dispute and DB Co may proceed in accordance with this Article 5 and Schedule 27 – Dispute Resolution Procedure.

ARTICLE 6 EFFECT OF REVIEW

- 6.1 Subject to Section 11.1(j) of the Project Agreement, any review and comment by the City or the City Representative of any Works Submittals are for general conformity to the obligations and requirements of the Project Agreement, and any such review and comment shall not relieve DB Co of the risk and responsibility for the Project Operations and for meeting all of DB Co’s obligations under and requirements of the Project Agreement, and shall not create any new or additional obligations or liabilities for the City. Without limiting the generality of

the foregoing, any and all errors or omissions in Works Submittals or of any review and comment shall not exclude or limit DB Co's obligations or liabilities in respect of the Works under the Project Agreement or exclude or limit the City's rights in respect of the Works under the Project Agreement.

ARTICLE 7 WORKS SUBMITTAL EXPLANATION

- 7.1 At any time, the City Representative may, acting reasonably, require DB Co or any DB Co Parties, including DB Co's consultants and any other relevant personnel, at no additional cost to the City, to explain to the City Representative and the City advisors the intent of DB Co's Works Submittals, including in relation to any design and any associated documentation and as to its satisfaction of the Output Specifications or any other Schedule to the Project Agreement, as applicable. DB Co shall provide the explanation to the City Representative within five Business Days (or such longer period as the Parties may agree) from the date of receipt of the request from the City Representative.

ARTICLE 8 REVISIONS

- 8.1 DB Co shall ensure that each Works Submittal keeps the same unique reference number throughout the review process, and that subsequent revisions of the same Works Submittal are identified by a sequential revision number. Correspondence related to such Works Submittal shall reference the reference number and revision number.
- 8.2 Re-submittals shall clearly show all revisions from the previous Works Submittal. Bound documents, including reports and manuals, shall contain a preface that clearly states how revisions are marked and the previous revision number against which the revisions have been marked. A consistent format for mark-ups of documents shall be used (e.g. deletions struck out and additions underscored). Revised portions of drawings shall be clearly marked (with appropriate means to visually distinguish between the parts of the drawing that are revised and the parts that are not revised) and the revision number and description of the revision shall be included on the drawing. Drawings produced during Design Development shall be exempt from requirements in Article 8.2.
- 8.3 All revisions must be able to be integrated into the As-built Drawings and the Record Drawings.
- 8.4 DB Co shall keep all Design Data current. If any Design Data is revised as part of a Works Submittal, all other Design Data relying on or based on that Design Data shall also be revised accordingly. All such revised Design Data shall also be submitted with the Works Submittal to which it relates.
- 8.5 [Not Used]

ARTICLE 9 AUDIT BY THE CITY REPRESENTATIVE

- 9.1 Without limiting any other right under the Project Agreement, the City Representative shall have the right to audit all Works Submittals, including comparing all Works Submittals to previous Works Submittals.

- 9.2 If during an audit or at any other time it is discovered by the City or DB Co (or resolved pursuant to Article 9.3) that any Works Submittals were not correctly implemented, DB Co shall at its sole cost immediately take all necessary steps to correct and modify the applicable Works Submittals and the Project Operations to which they relate and shall advise the City Representative of all such corrections and modifications.
- 9.3 Any Dispute concerning the implementation of a Works Submittal, subject to Article 5.1, shall be referred in the first instance to the Independent Certifier for resolution.

ARTICLE 10 VARIATIONS

- 10.1 [Not used].
- 10.2 If, having received comments from the City Representative on any Works Submittal, DB Co considers that compliance with those comments would amount to a Variation, DB Co shall, within ten (10) Business Days of receipt of and before complying with the comments, provide written Notice to the City of the same and, if it is agreed by the Parties that a Variation would arise if the comments were complied with, the City may, at their election, issue a Variation Enquiry (which shall be dealt with in accordance with Schedule 22 - Variation Procedure) or amend their comment on the Works Submittal. If the Parties do not agree that a Variation would arise if the comments were complied with, either party may proceed to resolve the matter in accordance with Article 5.3, including for clarity, the exercise by the City of their rights under Article 5.3. Subject to the foregoing sentence, any failure by DB Co to notify the City in accordance with this Article 10.2 that DB Co considers that compliance with any comments of the City Representative would amount to a Variation shall constitute an irrevocable acceptance by DB Co that any compliance with the City Representative's comments shall be without cost to the City and without any extension of time.

ARTICLE 11 GENERAL

- 11.1 Any capitalized terms used in the appendices to this Schedule 10 – Review Procedure, that are not defined in this Schedule 10 – Review Procedure or in Schedule 1 – Definitions and Interpretation, shall have the meanings given to them in Schedule 15-1 – Technical Terms and Reference Documents.

ARTICLE 12 COMPLIANCE WITH MTO MINIMUM DESIGN AND CONSTRUCTION CERTIFICATION REQUIREMENTS

- 12.1 In respect of the New MTO Infrastructure, DB Co shall comply with all of the obligations set forth in Appendix B.

APPENDIX A – MINIMUM WORKS SUBMITTAL REQUIREMENTS

ARTICLE 1 FORMAT FOR WORKS SUBMITTALS

1.1 All Works Submittals shall be submitted to the City in hardcopy and electronic format as follows:

- (a) Hardcopy requirements:
 - (i) one set of all Work Submittals shall be submitted in reduced format drawings (11” x 17”) and design briefs; and
 - (ii) one set of Works Submittals which are not drawings shall be submitted in 8.5” x 11” format, unless otherwise specified.
- (b) Electronic copy requirements:
 - (i) an electronic copy in the format set out in this Appendix A, together with its native file in standard format, or as prescribed by the City acting reasonably;
 - (ii) CAD drawings shall be provided in accordance with the City of Ottawa’s CADD Standards Manual, or otherwise in accordance with MTO CADD standards, for New MTO Infrastructure. DB shall confirm drawing conventions and standards, including AutoCAD and InRoads standards, title block and stationing convention, with the City prior to commencing design drawing production; and
- (c) All Works Submittals (or as otherwise agreed upon by the Parties) shall be uploaded to the EDMS. All other Submittals not otherwise specified shall be uploaded to the EDMS.

ARTICLE 2 SUBMITTALS

- 2.1 The following is a detailed list of the Works Submittals that DB Co is required to provide to the City for review and comment in accordance with this Schedule 10.
 - 2.2 Additional Works Submittals may be requested by the City Representative at any time in order to understand the Works, and DB Co shall be required to provide same to the City for review in accordance with this Schedule 10. A description of the minimum content of each Work Submittal provided is set out in the following sections.
 - 2.3 Works Submittal deliverables which are applicable to satisfying the requirements of multiple Works Submittal sections are permitted to be
-

reused, granted they meet all the requirements of each Works Submittal section they are applied to.

2.4 Submission Requirements

(a) The Works Submittal Requirements are detailed in the tables below.

[REDACTED]

**ATTACHMENT 1
Sample Design Certificates**

Certificate Ref No. []

DESIGN CERTIFICATE (GENERAL)

In respect of :

(Provide submittal details)

Project Agreement between the City and DB Co dated XX XX, XXXX (“the Project Agreement”) relating to the Project. Defined terms and expressions used in the Project Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Design Team for certifying the design of the Works to the extent that such Works components have been constructed, installed, altered, upgraded, and/or augmented, in accordance with Schedule 15-2 – Design and Construction Requirements.

1. We certify that we have the requisite professional qualifications, skill and experience to prepare the Design Data referred to herein in accordance with the requirements of the Project Agreement and all relevant Output Specifications.
2. We certify that we have prepared the Design Data for [.....] listed in the Schedule hereto in accordance with all applicable requirements contained in the Design Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking the preparation of such Design Data, and that in our professional opinion such Design Data:
 - a. complies with all applicable Output Specifications, as amended by the following:
 - (i) **[List, if any, the changes made by the issue of Variation(s)];**
 - b. complies with all applicable design requirements of the Project Agreement;

- c. complies with all applicable standards, codes and current Good Industry Practice; and
- d. accurately describes and depicts the Works to be undertaken.

SCHEDULE

[Include here drawing numbers and titles, reports, calculations, etc.]

Certified by:

Design Team (representative)

Name:

Title:

Date:

Professional Registration Number:

Affix Professional Seal

Signed:

Construction Contractor representative

Name:

Date:

This Certificate is:

- i. reviewed*
- ii. reviewed as noted as follows*
- iii. returned marked “rejected” as follows:*

* delete as appropriate

Signed:

City Representative

Name:

Date:

Certificate Ref No. []

DESIGN CERTIFICATE (ENVIRONMENTAL)

In respect of :

(Provide submittal details)

Project Agreement between the City and DB Co dated XX XX, XXXX (“the Project Agreement”) relating to the Project. Defined terms and expressions used in the Project Agreement have the same meanings in this Certificate.

Form of certificate to be used by the Design Team and the Environmental Director for certifying the design of environmental works incorporated in the Works in accordance with the Project Agreement.

1. We certify that we have the requisite professional qualifications, skill and experience to prepare the Design Data referred to herein in accordance with the requirements of the Project Agreement and all relevant Output Specifications.
2. We certify that we have prepared the Design Data for [.....] [Name and list of all elements of the environmental works] in the Schedule hereto in accordance with all applicable requirements contained in the Design Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking the preparation of such Design Data, and that in our professional opinion:
 - a) the said Design Data complies with all applicable Output Specifications, including Technical Appraisal Form No. [.....] dated [.....], as amended by the following:
 - i) **[List, if any, the changes made by the issue of Variation(s), and any Addenda to the foregoing Technical Appraisal Form];**
 - b) the said Design Data complies with all applicable design requirements of the Project Agreement;
 - c) the said Design Data complies with all applicable standards, codes, environmental permits licences approvals and authorizations, and current Good Industry Practice; and
 - d) the said Design Data accurately describes and depicts the Works to be undertaken.

SCHEDULE

[Include here drawing numbers and titles and reports, calculations, etc.]

Certified by:

Design Team (representative)

Name:

Title:

Date:

Professional Registration Number:

Affix Professional Seal

Signed:

Environmental Director

Name:

Title:

Date:

Professional Registration Number:

Affix Professional Seal

This Design Certificate is:

- i. reviewed*
- ii. reviewed as noted as follows*
- iii. returned marked “rejected” as follows:*

* delete as appropriate

Signed:

City Representative

Name:

Date:

ATTACHMENT 2

Sample Construction Certificate

Certificate Ref. No. []

CONSTRUCTION CERTIFICATE

In respect of :

(Provide submittal details)

Project Agreement between the City and DB Co dated XX XX, XXXX (“the Project Agreement”) relating to the Project. Defined terms and expressions used in the Project Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Design Team for certifying, as applicable:

- a) the substantial completion of construction activities in respect of those components of the [East][West] Works set out in paragraph 1 of this Construction Certificate;
- b) the Total Completion of construction activities in respect of the [East][West] Works, including Minor Deficiencies; or
- c) the total completion of construction activities in respect of any Reinstatement Work carried out by the Construction Contractor pursuant to Section 30 **[Damage and Destruction]** in accordance with a Reinstatement Plan.

in accordance with Schedule 15-2 – Design and Construction Requirements.

Construction Contractor’s Statement

We certify that **[name and element of the Works in respect of the [East][West] Substantial Completion Certificate][the Works in respect of the [East][West] Final Completion Certificate][the [East][West] Works in respect of the Final Completion Certificate**

(Reinstatement Work) has been designed, constructed, **[substantially completed]**, **[totally completed]**, commissioned and tested in all respects in accordance with: **[Note to Proponents: Inapplicable language to be deleted.]**

- a) the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure; and
- b) the provisions of the Project Agreement, including all applicable Output Specifications, as amended by the following Variation(s):

(i) **[List, if any, the changes made by the issue of Variation(s), and any Addenda to the foregoing Technical Appraisal Form];**

Signed.....

Construction Contractor representative

Name.....

Date.....

Design Team’s Statement

1. We certify that we have examined the [name and element of the [East][West] Works in respect of the [East][West] Substantial Completion Certificate][the [East][West] Works in respect of the [East][West] Final Completion Certificate][the [East][West] Works in respect of the Final Completion Certificate (Reinstatement Work)] in accordance with the requirements for examination of the Works contained in the Design Management Plan and the Construction Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such

examinations, and that in our professional opinion [the said element of the [East][West] Works][the [East][West] Works] has been designed, constructed, [substantially completed][totally completed], commissioned and tested in accordance with: **[Note to Proponents: Inapplicable language to be deleted.]**

(a) the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure; and

(b) the provisions of the Project Agreement, including all applicable Output Specifications, as amended by the following Variation(s):

[List, if any, the changes made by the issue of Variation(s), and any Addenda to the foregoing Technical Appraisal Form];

Signed.....

Design Team (representative)

Name.....

Title.....

Date.....

Professional Registration Number:

Affix Professional Seal

Receipt of this Certificate is acknowledged.

Signed.....

Independent Certifier

Name.....

Date.....

Professional Registration Number:

Affix Professional Seal

This Certificate is:

- i. reviewed*
- ii. reviewed as noted as follows*
- iii. returned marked “rejected” as follows:*

* delete as appropriate

Signed:

City Representative

Name:

Date:

APPENDIX B

MINIMUM DESIGN AND CONSTRUCTION

SUBMITTAL AND CERTIFICATION REQUIREMENTS FOR NEW MTO INFRASTRUCTURE

1. DEFINITIONS

- 1.1** “**Appropriate Person**” has the meaning given in Article 3.1 (b) (iii)
- 1.2** “**Bluetooth Reader**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 – Highway Works.
- 1.3** “**Checking Team**” has the meaning given in Article 2.9 of Part A of Schedule 15-2, Part 9 – Highway Works.
- 1.4** “**Deck**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.5** “**Design Criteria**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.6** “**Design Manager**” has the meaning given in Schedule 9 – Key Individuals.
- 1.7** “**Foundation**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.8** “**Handover**” means, as applicable, the successful handover, by DB Co of, the New MTO Infrastructure, or a component thereof, to City or, where Notice of Delegation has been provided by City in respect of New MTO Infrastructure, to MTO, in accordance with Section 25.16 of the Project Agreement including, for clarity, the receipt of City’s or MTO’s (as the case may be) confirmation that Handover has been successfully achieved and the provision of the Notice to the City in accordance with Section 25.16(g) of the Project Agreement.
- 1.9** “**Highway**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.10** “**Independent Checking Team**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.11** “**Independent Structural Design Check Certificate**” means the form provided as Attachment 4 to this Appendix B.
- 1.12** “**MTO Design Management Plan**” has the meaning given in Section 2.1(a) of this Appendix B.

- 1.13** “**Overhead Sign Support Structure**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.14** “**Pavement**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.15** “**Pavement Markings**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.16** “**Regulatory Sign**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.17** “**Retaining Wall**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.18** “**Roads**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.19** “**Road Safety Audit**” has the meaning given in Article 10 of Part B of Schedule 15-2, Part 9 - Highway Works.
- 1.20** “**Road Safety Audit Certificate**” has the meaning given in Article 10.8(a) of Part B of Schedule 15-2, Part 9 - Highway Works.
- 1.21** “**Significant and Complex Structures**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.22** “**Structure**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.23** “**Substructure**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.24** “**Superstructure**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.25** “**Technical Appraisal Form**” or “**TAF**” means a form substantially in the format attached as Attachment 1 - Sample Contents for a Structural TAF to Appendix B of Schedule 10 - Review Procedure.
- 1.26** “**Temporary Works**” means works that are performed to serve a specific temporary function in the execution of the Works and in respect of which any resulting infrastructure is removed at such time when its temporary use is no longer required”
- 1.27** “**VDS**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.
- 1.28** “**VMS**” has the meaning given in Article 1.6 of Part A of Schedule 15-2, Part 9 - Highway Works.

2. MTO DESIGN MANAGEMENT PLAN AND TECHNICAL APPRAISAL FORMS

2.1 Submission of MTO Design Management Plan

- (a) Within 90 days following Financial Close, DB Co shall submit a Design Management Plan in respect of New MTO Infrastructure (the “**MTO Design Management Plan**”) to the City in accordance with Schedule 10 - Review Procedure. The MTO Design Management Plan shall include:
 - (i) the organization chart, including the Design Manager and Highway Works Manager, for all design activities;
 - (ii) the procedures to be used for designing and checking each of the designs;
 - (iii) the identification of the Checking Team and Independent Checking Team;
 - (iv) the contents and format of Design Development Submittals, as well as the Construction Document Submittals;
 - (v) a design review and audit schedule, indicating dates that DB Co plans to:
 - (A) conduct internal audits of the design verification process;
 - (B) submit Design Development Submittals and Construction Document Submittals; and
 - (C) undertake design review workshops in accordance with Section 1.8 of this Schedule 10. MTO shall be included as an invitee.
 - (vi) the process and schedule for Road Safety Audits;
 - (vii) a work breakdown structure for design indicating the Design Team and associated designers;
 - (viii) a drawing tree indicating the organization and hierarchy of DB Co’s drawings;
 - (ix) appropriate metrics to measure the progress of the design for each discipline;
 - (x) the process for certifying construction including the identification and organization of the personnel responsible for verifying construction compliance with the Design Data and the provisions of the Project Agreement to enable the Design Team representative to sign and seal the Construction Certificates; and

- (xi) the Review Procedure Activities Register (as also referenced in Schedule 12 – Works Scheduling Requirements), including plans for weekly or bi-weekly updates of this register and common platform where such register is shared with the City.
- (b) Any subsequent amendments or updates to the MTO Design Management Plan shall be submitted by DB Co to the City in accordance with Schedule 10 - Review Procedure.

2.2 Compliance with MTO Design Management Plan

- (a) DB Co shall implement and comply with the initial MTO Design Management Plan which has been reviewed by the City in accordance with Schedule 10 - Review Procedure, and any subsequent amendments or updates to the initial MTO Design Management Plan made following a review by the City in accordance with Schedule 10 - Review Procedure, in connection with all Design Data prepared or adopted in connection with the Output Specifications, the Environmental Obligations, and any other design or Construction Activities in the Project Agreement within the Highway Corridor Lands.

2.3 TAF Submission Requirements

- (a) Each Final Design Development Submittal package submitted by DB Co shall be accompanied by a completed Technical Appraisal Form (TAF).
- (b) In any case where submitted Design Data involves any mechanical, electrical and/or intelligent transportation system functions, or similar specialization, DB Co shall submit to the City in accordance with Schedule 10 - Review Procedure a TAF in respect of such data and functions.
- (c) In any case where the New MTO Infrastructure involves the complete or partial demolition of an existing Structure, DB Co shall submit to the City in accordance with Schedule 10 - Review Procedure a TAF in respect of such complete or partial demolition.

2.4 TAF Form and Content

- (a) Each TAF submitted by DB Co pursuant to Section 2.3 of this Appendix B shall be in the format shown in Attachment 1 - Sample Contents for a Structural TAF to this Schedule 10 and shall:
 - (i) for Final Design Development Submittals, include the relevant Design Criteria, environmental and ground considerations, and interface requirements, together with a listing of the design documentation included in the design package; and
 - (ii) be signed by:

- (A) the DB Co Representative; and
- (B) the Design Manager or Appropriate Person as necessary.

2.5 TAF Variation

- (a) Any variation to a TAF which has been subject to the Review Procedure during design, assessment or any Construction Activity shall be submitted in accordance with Schedule 10 - Review Procedure as an addendum to the TAF.

3. DESIGN AND CONSTRUCTION SUBMISSIONS, REVIEW AND REPORTS

3.1 MTO Design and Construction Certification

- (a) The following terms shall have the following meanings:
- (i) “**MTO Construction Certificate (Interim)**” means the certificate(s) entitled “MTO Construction Certificate (Interim)” in the form set out in Attachment 3 to this Appendix B to be issued by DB Co pursuant to Section 3.1(d) of this Appendix B of Schedule 10 – Review Procedure;
 - (ii) “**MTO Construction Certificate (Completion)**” means the certificate(s) entitled “MTO Construction Certificate (Completion)” in the form set out in Attachment 3 to this Appendix B to be issued by DB Co pursuant to Section 3.1(d) of this Appendix B of Schedule 10 – Review Procedure;
 - (iii) “**MTO Construction Certificates**” means the MTO Construction Certificate (Interim) and the MTO Construction Certificate (Completion) and “**MTO Construction Certificate**” means any one of them.
 - (iv) “**MTO Design Certificate (Environmental)**” means the certificate(s) entitled “MTO Design Certificate (Environmental)” in the form set out in Attachment 2 to this Appendix B to be issued by DB Co pursuant to Section 3.1(c) of Appendix F of Schedule 10 – Review Procedure;
 - (v) “**MTO Design Certificate (General)**” means the certificate(s) entitled “MTO Design Certificate (General)” in the form set out in Attachment 2 to this Appendix B to be issued by DB Co pursuant to Section 3.1(c) of this Appendix B of Schedule 10 – Review Procedure;
 - (vi) “**MTO Design Certificates**” means the MTO Design Certificate (General) and the MTO Design Certificate (Environmental) and “**MTO Design Certificate**” means any one of them.
- (b) MTO Design and Construction Certification Procedure
- (i) DB Co shall implement and ensure compliance with the procedure set out in this Section 3.1 (the “**MTO Design and Construction Certification Procedure**”) until Handover of the New MTO Infrastructure.
 - (ii) The MTO Design and Construction Certification Procedure shall apply to all Design Data prepared or adopted in connection with the New MTO Infrastructure, including any further design development or changes to a design once a TAF has been subjected to the Review Procedure.

- (iii) DB Co shall ensure that all certification procedures referred to in the Design and Construction Certification Procedure are complied with by the appropriate persons referred to therein, including the Design Team, and any independent team or engineer within the Design Team, as the case may be (together, the “Appropriate Persons”) and that all Appropriate Persons are at all relevant times duly authorized and qualified to carry out such procedures and to sign the relevant certificates. Any failure by any Appropriate Person to fulfill the obligations required of them under the MTO Design and Certification Procedure shall be a breach of the DB Co’s obligations under the Project Agreement.
 - (iv) DB Co shall submit all MTO Design Certificates and MTO Construction Certificates, together with the supporting documentation, to the City for review, acting reasonably, in accordance with Schedule 10 - Review Procedure. The submitted MTO Design Certificates and MTO Construction Certificates shall have original signatures, seals and registration numbers (as required in the form provided in Attachment 2 and 3 to Appendix B of Schedule 10 – Review Procedure).
- (c) MTO Design Certificates
 - (i) DB Co shall prepare and issue a separate MTO Design Certificate (in the form as provided in Attachment 2 of Appendix B) for New MTO Infrastructure for each submitted Construction Document Submittal review package, to the City for review in accordance with the Review Procedure. All MTO Design Certificates prepared and issued by DB Co shall be:
 - (A) either the MTO Design Certificate (General) or MTO Design Certificate (Environmental), as applicable;
 - (B) signed and sealed by a principal of the Design Team, and the responsible professional, who shall be a Professional Engineer or a registered Architect;
 - (C) signed by the DB Co Representative; and
 - (D) in the case only of MTO Design Certificates (Environmental), signed by the Environmental Director.
 - (ii) Any person who signs a MTO Design Certificate shall clearly print his or her name and the position held in his or her organization on the MTO Design Certificate.
- (d) MTO Construction Certificates
 - (i) DB Co shall prepare and issue MTO Construction Certificates (in the form as provided in Attachment 3 to Appendix B of Schedule 10 –

Review Procedure) for New MTO Infrastructure to the City for review in accordance with the Review Procedure:

- (A) in the case of MTO Construction Certificate (Interim), within 15 Business Days following the end of each calendar month (for that calendar month), from Financial Close until the date of delivery of written confirmation of completion of Handover of the New MTO Infrastructure pursuant to Article 25.16(f)(v) of the Project Agreement;
 - (B) in the case of MTO Construction Certificate (Completion) at least 10 Business Days prior to the delivery of written confirmation of completion of Handover of the New MTO Infrastructure pursuant to Article 25.16(f)(v) of the Project Agreement.
- (ii) All MTO Construction Certificates prepared and issued by DB Co shall be:
- (A) signed by the Construction Contractor representative;
 - (B) signed and sealed by the responsible professional who shall be a Professional Engineer or a registered Architect, and a principal of the Design Team;
 - (C) signed by the DB Co Representative; and
 - (D) for each MTO Construction Certificate (Completion) issued between Financial Close to Handover of the New MTO Infrastructure, signed by the Independent Certifier acknowledging receipt.
- (iii) Any person who signs a MTO Construction Certificate shall clearly print his or her name and the position held in his or her organization on the MTO Construction Certificate.

3.2 Format of Design and Construction Submissions

- (a) DB Co shall provide all Submittals in the format detailed in Appendix A of this Schedule 10 – Review Procedure.
- (b) [Intentionally deleted]
- (c) [Intentionally deleted]
- (d) For greater clarity, drawings for DB Co System Infrastructure, New City Infrastructure and New Utility Company Infrastructure to be constructed by DB Co within the Highway Corridor Lands shall be in accordance with the applicable standards of the City and Utility Companies, respectively.

- (e) [Intentionally deleted]

3.3 Design and Construction Submission Review

- (a) The Design Development Submittals and Construction Document Submittals from all design disciplines shall be submitted to the City in accordance with Schedule 10 - Review Procedure. The Pre-Final Design Development, Final Design Development and Construction Document Submittals shall consist of the relevant TAF(s) together with all final design drawings, supporting Design Data and calculations required in accordance with the design requirements outlined in the Project Agreement, in particular and including Schedule 15-2, Part 9 - Highway Works, and this Appendix B.
- (b) Each Design Development Submittal and Construction Document Submittal package shall cover a specific geographic segment of the Highway Works and shall include the submission requirements pertaining to all disciplines, as identified in this Appendix B. DB Co may subdivide the Highway Works into the submission of a maximum of three Design Development Submittal packages (maximum of two for Highway 417, and maximum of one for Highway 416).
- (c) DB Co shall not submit any Construction Document Submittal until Pre-Final Design Development Submittals have been submitted and reviewed pursuant to this Schedule 10 for all aspects of Highway Works.

3.4 Temporary Works

- (a) As a minimum, design submissions for Temporary Works shall include those items intended for public use and/or potentially affecting public safety. Final designs for these Temporary Works shall be submitted to the City in accordance with Schedule 10 - Review Procedure.
- (b) Design Data relating to any Temporary Works shall be checked as follows:
 - (i) any such Design Data prepared by or on behalf of the Construction Contractor requires an independent check by the Design Team; and
 - (ii) any such Design Data prepared by the designer requires an independent check by a Checking Team which may be from the designer but shall be independent of the Design Team.
- (c) In performing the check referred to in paragraph (b) above, the designer shall satisfy itself that:
 - (i) the Design Data meets the project requirements and otherwise complies with the requirements of the Project Agreement;

- (ii) the Temporary Works (as a whole and the constituent parts) are satisfactory for the safe and proper discharge of DB Co's relevant obligations; and
 - (iii) the Design Data reflects the requirements of the relevant governmental authorities for all affected Highways or other Roads or areas used by or accessible to the public other than the New MTO Infrastructure.
- (d) Where any Temporary Works may endanger public safety on other road or area used by or accessible to the public other than the New MTO Infrastructure, DB Co shall consult the relevant Governmental Authority and the Design Data shall reflect the requirements of such Governmental Authority.
- (e) Road Safety Audit Certificate shall be submitted as part of the Submittals in respect of Temporary Works in accordance with Article 10 (Road Safety Audit) of Part B of Schedule 15-2, Part 9 - Highway Works.

4. DESIGN DEVELOPMENT SUBMITTALS

4.1 General

- (a) In accordance with the MTO Design Management Plan and requirements of the Design and Construction Certification Procedure, DB Co and the City shall agree on the design information to be submitted for review in the Design Development Submittals, the schedule of such submissions and the scope of the review. The minimum requirements for the Design Development Submittals are outlined in this Appendix B.
- (b) The content of such interim design submissions shall be appropriate to the subject and discipline. The information provided shall be adequate to show that the design is proceeding in compliance with the Project Agreement for all disciplines and is taking into consideration the relevant construction activities.
- (c) Design Development Submittals shall be prepared and shall have indices and sectional dividers. The design folders shall contain pertinent correspondence, shall be arranged by subject matter in chronological order, and shall include the design criteria, design development calculations and backup information. Design submissions shall include copies of all approvals, design reports, correspondence and calculations.
- (d) The Road Safety Audit Certificate shall be submitted as part of Design Development Submittals in accordance with Schedule 15-2, Part 9, Part B, Article 10 (Road Safety Audit).

4.2 Pre-Final Design Development Submission

(a) General

- (i) DB Co shall prepare and submit any necessary draft addenda to the MTO Design Criteria (as described in MTO Directive PHM-B-021) based on DB Co's design.

(b) Roadway Design

- (i) The Pre-Final Design Development Submittals shall contain the following:
 - (A) all design drawings, including complete removals, new construction, laning and geometrics, profiles, typical and template cross-sections, and drainage;
 - (B) all staging drawings that include traffic management requirements to complete the work as well as any operational constraints related to construction operations and/or traffic management;

- (C) Explicit Safety Analysis Report;
 - (D) Ball Bank Indicator Report;
 - (E) Road Safety Audit Reports;
 - (F) a detailed summary of critical constructability considerations;
 - (G) fencing plan and design; and
 - (H) ramp gate location plan and design.
- (c) **Drainage Design**
- (i) The Pre-Final Design Development Submittals shall:
 - (A) address both temporary and permanent drainage design;
 - (ii) The Pre-Final Design Development Submittals shall contain the following:
 - (A) all design parameters and requirements in accordance with Article 7 (Drainage and Erosion Control Design Criteria) of Part B of Schedule 15-2, Part 9 - Highway Works;
 - (B) the technical analysis and application documentation for a Permit to Take Water or EASR registration (if required);
 - (C) all drawings of drainage systems including storm sewer design sheets;
 - (D) updated floodplain mapping;
 - (E) detail drawings of water course realignments, drainage conveyance systems, and stormwater management facilities;
 - (F) Erosion and Sediment Control Plan; and
 - (G) Drainage and Stormwater Management Report, including digital modelling files.
- (d) **Structures, Culvert, Submerged Culverts, High Mast Lighting Footings and Overhead Sign Support Structure**
- (i) The Pre-Final Design Development Submittals shall contain the following:
 - (A) Structural Design Reports for any Underpass or Overpass Structures and Graham Creek Culvert being rehabilitated or

replaced as part of Highway Works (calculations need not be provided at this stage);

(B) Structure Survey Reports; and

(C) Movement Plans.

(e) **Retaining Wall and Noise Barrier Design**

(i) The Pre-Final Design Development Submittals shall contain the following:

(A) geotechnical foundation report or reference to the applicable section of the Geotechnical Report;

(B) descriptions of maintenance considerations; and

(C) all design drawings.

(f) **Geotechnical Foundation Design**

(i) The Pre-Final Design Development Submittals shall contain the following:

(A) Geotechnical Report;

(B) Geotechnical Instrumentation and Monitoring Plan; and

(C) Plans and procedures for groundwater control.

(g) **Pavement Design**

(i) The Pre-Final Design Development Submittals shall contain the following:

(A) Pavement Design Report; and

(B) proposed Pavement design, depicted as cross-section drawings.

(h) **Electrical, Signing and Pavement Markings Design**

(i) The Pre-Final Design Development Submittals shall include electrical (including signals, lighting and telecommunications), signing and pavement marking plans in accordance with the requirements of Schedule 15-2, Part 9 - Highway Works, Part B, Article 6 and Schedule 15-2, Part 9 - Highway Works, Part B, Article 8.

(ii) The Pre-Final Design Development Submittals shall contain the following:

- (A) Design drawings for all electrical systems shall contain the following:
 - (I) electrical equipment and all associated support structure locations;
 - (II) lighting calculations where appropriate;
 - (III) service locations;
 - (IV) layout drawings showing electrical lighting poles, ducts, chambers, power distribution and/or supply cabinets; and
 - (V) wiring diagrams depicting low voltage power distribution as well as high voltage wiring where applicable.
- (B) Design drawings for the telecommunications conduit network, if applicable, shall contain the following:
 - (I) network diagram showing conduit locations; and
 - (II) design drawings showing the locations for all interconnection points.
- (C) Signage submissions shall contain the following:
 - (I) overhead Sign Support Structures and extruded ground-mounted Signs structure details and design calculations;
 - (II) sign design sheets for all custom guide signs;
 - (III) sign details and shop drawings for all support structures and footings; and
 - (IV) note all cantilever and sign bridge Structures submissions shall be undertaken in accordance with the MTO Sign Support Manual.
- (D) PHM-125 signal drawings shall be submitted for all temporary and permanent signals and shall contain the following:
 - (I) all Regulatory Signs that assist in the signal operations (to be included on drawing and in a legend);
 - (II) Signal hardware excluding underground provisions and electrical wiring;

- (III) Vehicle detection and nearby accesses;
 - (IV) Pavement Markings including lanes, crosswalks, stopbars and through/turning arrows;
 - (V) active transportation accommodations;
 - (VI) MTO PHM-125 standard template;
 - (VII) Hard copies in 1:500 scale; and
 - (VIII) Electronic copies in AutoCAD format.
- (E) The Temporary Signing Plan, Permanent Signing Plan, Temporary Pavement Marking Plan, and Permanent Pavement Marking Plan.
- (i) **Landscaping and Site Restoration**
- (i) The Pre-Final Design Development Submittals shall contain the following:
- (A) detailed landscape drawings that reflect any design changes, and document public consultation conducted as part of the development of the landscape drawings (drawings shall be of a suitable scale for legibility, and provide enlarged detailing where needed);
 - (B) a report detailing how the Highway Works design adheres to Context Sensitive Design requirements; and,
 - (C) tree removal and mitigation plan drawings.
- (j) **Advanced Traffic Management Systems**
- (i) The Pre-Final Design Development Submittals shall contain the following:
- (A) all design parameters and requirements in accordance with Article 11 (Advanced Traffic Management Systems Civil Requirements) of Part B of Schedule 15-2, Part 9 - Highway Works.
 - (B) design drawings that contain the following:
 - (I) layout drawings detailing the CCTV camera, VMS, Bluetooth Reader, communication system, and cabinet locations including all conduit and electrical chambers with device labelling;

- (II) detector input file connections;
- (III) communication schematics and fibre allocation table;
- (IV) electrical wiring diagrams;
- (V) civil infrastructure associated with ATMS;
- (VI) any modified MTOD including OPSD, and installation drawings; and
- (VII) temporary and removals drawings.

(k) **Traffic Engineering**

- (i) The Pre-Final Design Development Submittals shall contain the following:
 - (A) Traffic Analysis Report, which shall include comprehensive traffic analysis along with all supporting documentation and calculations;
 - (B) a detailed summary of critical traffic management considerations;
 - (C) signal timing sheets and phasing diagrams associated with the design of signalized intersections; and
 - (D) the Haul Route Plan.

(l) **Environmental Design**

- (i) The Pre-Final Design Development Submittals shall contain the following:
 - (A) applicable drawings that include:
 - (I) ecological restoration areas including Species-at-Risk and any environmentally sensitive areas, and all restoration areas;
 - (II) all fisheries compensation plan areas to secure Fisheries Act Authorizations from Fisheries and Oceans Canada;
 - (III) all drainage and stormwater management pond areas; and
 - (IV) erosion and sediment control measures.

- (B) riparian restoration and terrestrial reclamation/revegetation drawings that, as a minimum, describe timing requirements, seed mixes and applications rates of hydroseeding and site specific restoration plans, including species type, size and spacing for riparian areas, areas of higher sensitivity, and areas prone to erosion or shallow slope movement;
 - (C) environmental design drawings that show environmental mitigation and compensation features and any environmental features to be constructed;
 - (D) environmental design documentation including:
 - (I) regulatory agency review and acceptance documentation for the Environmental Management System specific to the Highway Works;
 - (II) all licenses, notifications, permits, authorisations and approvals specific to the Highway Works; and
 - (III) all assessments, studies, surveys, monitoring reports, and plans specific to the Highway Works.
 - (E) an environmental design criteria checklist that lists general environmental commitments and assurances, environmental design commitments, site specific environmental features and environmental mitigation/compensation plans including all commitments, assurances and plans relating to archaeological features; and
 - (F) stakeholder issues, environmental issues and mitigation plans.
- (m) **Utility Design**
- (i) The Pre-Final Design Development Submittals shall contain the following:
 - (A) Utility Infrastructure Relocation Plans, as generally described in Schedule 10, Article 2, and including the additional requirements identified in Schedule 15-2, Part 9; and
 - (B) Protection measures for Utilities to be protected in place during the Highway Works.

4.3 Final Design Development Submission

(a) **General**

- (i) All Final Design Development Submittals shall address any comments of the City from the Design Workshops, internal design reviews, quality control, and design reports.
 - (ii) Quantity Sheets shall be provided by DB Co and shall be prepared using the latest version of the MTO's Contract Preparation System (CPS).
 - (iii) DB Co shall prepare and submit any necessary addenda to the MTO Design Criteria (as described in MTO Directive PHM-B-021) based on DB Co's design. This will be the final submittal for approval by MTO.
 - (iv) The Final Design Development Submittals shall contain all specifications, special provisions and operational constraints for the Works.
- (b) **Roadway Design**
- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals; and
 - (B) Cross-section drawings.
- (c) **Drainage Design**
- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.
- (d) **Structures, Culvert, Submerged Culverts, High Mast Lighting Footings and Overhead Sign Support Structure**
- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.
- (e) **Retaining Wall and Noise Barrier Design**
- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals; and
 - (B) a neat, bound, indexed set of design calculations for the walls initialled by the responsible engineer, who shall be a duly experienced Professional Engineer of the appropriate discipline.

(f) **Geotechnical Foundation Design**

- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.

(g) **Pavement Design**

- (i) The Final Design Development Submittals shall contain the following :
 - (A) updated information from the Pre-Final Design Development Submittals.

(h) **Electrical, Signing and Pavement Markings Design**

- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.

(i) **Landscaping and Site Restoration**

- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.

(j) **Advanced Traffic Management Systems**

- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals; and
 - (B) Pre-Installation Test Plan (PIT), Proof of Performance Test Plan (POP), and System Integration Test Plan (SIT).

(k) **Traffic Engineering**

- (i) The Final Design Development Submittals shall contain the following:
 - (A) updated information from the Pre-Final Design Development Submittals.

(l) **Environmental Design**

- (i) The Final Design Development Submittals shall contain the following:

- (A) updated information from the Pre-Final Design Development Submittals; and
 - (B) draft Design and Construction Report (DCR).
- (m) **Utility Design**
- (i) The Final Design Development Submittals shall contain the following:
 - (A) Updated information from the Final Design Development Submittals, including all draft materials required for an Encroachment Permit application.

5. CONSTRUCTION DOCUMENT SUBMISSION

5.1 General

- (a) Construction Document Submittals shall be prepared and shall have indexes and sectional dividers. The design folders shall contain pertinent correspondence, shall be arranged by subject matter in chronological order, and shall include the design criteria, design calculations and backup information. Design submissions shall include copies of all approvals, design reports, correspondence and calculations.
- (b) Final design drawings and reports shall be developed to a stage that is ready to be signed and sealed by the responsible Engineer, who shall be a duly experienced Professional Engineer of an appropriate discipline.
- (c) The Road Safety Audit Certificate shall be submitted as part of Construction Document Submittals in accordance with Schedule 15-2, Part 9 - Highway Works, Part B, Article 10 (Road Safety Audit).
- (d) DB Co shall document changes and describe the design work that has been developed since the Design Development Submittals or previous design stage of Construction Document Submittals.
- (e) All Construction Document Submittals shall address any comments of the City from Design Review Workshops, internal design reviews, quality control, and design reports.
- (f) The Construction Document Submittals shall contain resolution of all issues identified during Design Development Submittal reviews.
- (g) Quantity Sheets shall be provided by DB Co and shall be prepared using the latest version of the MTO's Contract Preparation System (CPS).
- (h) The Construction Document Submittals shall contain all specifications, special provisions and operational constraints for the Works.

5.2 Roadway Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.3 Drainage Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.4 Structures, Culvert, Submerged Culverts, High Mast Lighting Footings and Overhead Sign Support Structure

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.5 Retaining Wall and Noise Barrier Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals;
- (b) For proprietary Retaining Walls, the responsible engineer, who shall be a duly experienced Professional Engineer of the appropriate discipline, shall certify the design and construction of the Retaining Walls.

5.6 Geotechnical Foundation Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.7 Pavement Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.8 Electrical, Signing and Pavement Markings Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.9 Landscaping and Site Restoration

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.10 Intelligent Transportation Systems

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.11 Traffic Engineering

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals.

5.12 Environmental Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) updated information from the Final Design Development Submittals;
 - (ii) Design and Construction Report;
 - (iii) Final Eligibility Letter for EA Clearance / Environmental Clearance Letter, and comments and responses during the completed 30 day review period; and
 - (iv) Contract drawings as required and in conformity to Design and Construction Reports (DCR).

5.13 Utility Design

- (a) The Construction Document Submittals shall contain the following:
 - (i) Updated information from the Final Design Development Submittals, including all draft materials required for an Encroachment Permit application (or a copy of the application if already submitted to MTO).

5.14 Issued for Construction Drawings

- (a) DB Co shall submit signed and sealed copies of all drawings and specifications that are “Issued for Construction”, together with manuals, instructions to the Construction Contractor and other relevant information as requested by the City Representative, to the City Representative and to the Independent Certifier.
- (b) Issued for Construction documents shall be signed and sealed by the responsible engineer, who shall be a Professional Engineer.

5.15 Record Drawings

- (a) DB Co shall provide a detailed log (spreadsheet format) identifying all Record Drawings. The detailed log shall include, as a minimum, the drawing number for all Record Drawings with a summary of the changes made during the Construction Period.

6. CHECKING OF STRUCTURAL DESIGN

- 6.1** In accordance with Article 4.2 (General Requirements) of Part B of Schedule 15-2, Part 9 - Highway Works, for relevant design submissions submitted in accordance with the Review Procedure, DB Co shall submit an Independent Structural Design Check Certificate, in the form provided as Attachment 4 to this Appendix B.

ATTACHMENT 1

Sample Contents for a Structural TAF

SAMPLE CONTENTS FOR A STRUCTURAL TAF

Ref. No:

1. PROJECT DESCRIPTION

- 1.1 Name and location of structure
- 1.2 Permitted traffic speed (for a Bridge give over and/or under)

2. PROPOSED STRUCTURE

- 2.1 Description of Structure
- 2.2 Structural type *(Include reasons for choice)*
- 2.3 Foundation type *(Include reasons for choice)*
- 2.4 Span arrangements *(Include reasons for choice)*
- 2.5 Barrier type
- 2.6 Proposed arrangements for inspection and maintenance
- 2.7 Materials and finishes

3. DESIGN/ASSESSMENT CRITERIA

- 3.1 Live Loading, Clearances
 - 3.1.1 Bridge code loading
 - 3.1.2 Design vehicle
 - 3.1.3 Other live loading
 - 3.1.4 Provision for exceptional abnormal loads:
 - 3.1.4.1 Gross weight
 - 3.1.4.2 Axle load and spacing
 - 3.1.4.3 Location of vehicle track on deck cross-section
 - 3.1.5 Any special loading not covered above
 - 3.1.6 Minimum clearances provided (vertical and horizontal)
 - 3.1.7 Authorities consulted and any special conditions required

3.2 List of relevant design documents

4. STRUCTURAL ANALYSIS

4.1 Methods of analysis proposed for Superstructure, Substructure and Foundations

4.2 Description and diagram of structure to be used for analysis

4.3 Assumptions intended for calculation of structural element property and stiffness

4.4 Proposed earth pressure coefficients (k_a , k_o , or k_p) to be used in design of earth retaining elements

5. GROUND CONDITIONS

5.1 Acceptance of interpretative recommendations of the soils report to be used in the design and reasons for any proposed departures

5.2 Describe Foundations fully including the reasons for adoption of allowable and proposed bearing pressures/pile loads, strata in which Foundations are located, provision for skin friction effects on piles and for lateral pressures due to compression of underlying strata, etc.

5.3 Differential settlement to be allowed for in design of structure

5.4 Anticipated ground movements or settlement due to embankment loading, flowing water, and measures proposed to deal with these defects as far as they affect the structure

5.5 Results of tests of ground water (e.g. pH value, chloride or sulphate content) and any counteracting measures proposed (as applicable)

5.6 Anticipated ground movements or settlement due to seismic loading, measures proposed to deal with these impacts as far as they affect the structure

6. CHECKING

6.1 Name of proposed Checking Team

7. DRAWINGS AND DOCUMENTS

7.1 List of drawings (including numbers) and documents accompanying the submission. To include:

7.1.1 a location plan;

7.1.2 a preliminary general arrangement drawing; and

7.1.3 relevant parts of the ground investigation report.

8. THE ABOVE DESIGN AND CONSTRUCTION PROPOSALS ARE SUBMITTED FOR REVIEW.

Signed: _____

[Design Manager]

Name: _____

Engineering Qualifications: _____

Date: _____

Professional Registration Number:

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____

Professional Registration Number:

Affix Professional Seal

ATTACHMENT 2

Form of MTO Design Certificates

Certificate Ref No. []

MTO DESIGN CERTIFICATE (GENERAL)

In respect of :..... (Provide
submittal details e.g. Roadway, Structures, Drainage, Geotechnical, etc.)

*Project Agreement between the City and DB Co dated [●] (“the Project Agreement”)
relating to the Project. Defined terms and expressions used in this certificate have the meanings
given in the Project Agreement.*

*This form of certificate is to be used by the Design Team and DB Co for certifying the
design of the New MTO Infrastructure to the extent that such New MTO Infrastructure
components have been constructed, installed, altered, upgraded, and/or augmented, in
accordance with Schedule 15-2 – Output Specifications - Design and Construction.*

1. We certify that we have the requisite professional qualifications, skill and
experience to prepare the Design Data referred to herein in accordance with the requirements of
the Project Agreement and all relevant Output Specifications.

2. We certify that we have prepared the Design Data for [.....] listed
in the schedule hereto in accordance with all applicable requirements contained in the [MTO
Design Management Plan] [Design Quality Management Plan] and utilizing the standards of
care, skill and diligence that, in accordance with the standards of our profession, are required of
experienced professionals undertaking the preparation of such Design Data, and that in our
professional opinion such Design Data [Note to Proponents: Inapplicable language to be
deleted/]:

i. complies with all applicable [Output Specifications], including Technical
Appraisal Form No. [.....] dated [.....] as amended by the following [Note to
Proponents: Inapplicable language to be deleted.]:

**[List, if any, the changes made by the issue of Variation(s) and any addenda
to the foregoing Technical Appraisal Form];**

ii. complies with all applicable design requirements of the Project Agreement;

iii. complies with Applicable Law and Good Industry Practice; and

iv. accurately describes and depicts the New MTO Infrastructure to be undertaken.

SCHEDULE

[Include here drawing numbers and titles, reports, calculations, etc.]

Certified by: _____

[Design Team (principal)]

Name: _____

Title: _____

Date: _____

Professional Registration Number:

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____

Certificate Ref No. []

MTO DESIGN CERTIFICATE (ENVIRONMENTAL)

Project Agreement between the City and DB Co dated [●] (“the Project Agreement”) relating to the Project. Defined terms and expressions used in this certificate have the meanings given in the Project Agreement.

This form of certificate is to be used by the Design Team, Environmental Director and DB Co for certifying the design of environmental works incorporated in the New MTO Infrastructure in accordance with the Project Agreement.

1. We certify that we have the requisite professional qualifications, skill and experience to prepare the Design Data referred to herein in accordance with the requirements of the Project Agreement and all relevant Design and Construction Specifications.

2. We certify that we have prepared the Design Data for [.....] [Name and list of all elements of the environmental works] in the schedule hereto in accordance with all applicable requirements contained in the Design Quality Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking the preparation of such Design Data, and that in our professional opinion such Design Data:
 - i. complies with all applicable [Design and Construction Specifications], including Technical Appraisal Form No. [.....] dated [.....], as amended by the following [Note to Proponents: Inapplicable language to be deleted.]:

[List, if any, the changes made by the issue of Variation(s), and any addenda to the foregoing Technical Appraisal Form];

 - ii. complies with all applicable requirements of Schedule 17 - Environmental Obligations;

 - iii. complies with all applicable design requirements of the Project Agreement;

 - iv. complies with Applicable Law and Good Industry Practice; and

 - iv. accurately describes and depicts the New MTO Infrastructure to be undertaken.

SCHEDULE

[Include here drawing numbers and titles, reports, calculations, etc.]

Certified by: _____

[Design Team (principal)][Designer for OM&R Provider (principal)] **[Note to Proponents: Inapplicable language to be deleted.]**

Name: _____

Title: _____

Date: _____

Professional Registration Number:

Affix Professional Seal

Signed: _____

Environmental Director

Name: _____

Title: _____

Date: _____

Professional Registration Number:

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____

ATTACHMENT 3

Form of MTO Construction Certificates

Certificate Ref. No. []

MTO CONSTRUCTION CERTIFICATE (INTERIM)

Project Agreement between the City and DB Co dated [●] (“the Project Agreement”) relating to the Project. Defined terms and expressions used in this certificate have the meanings given in the Project Agreement.

This form of certificate is to be used by the Design Team, Construction Contractor and DB Co for certifying in accordance with Section 3.1(d) of this Appendix B to Schedule 10 – Review Procedure, the Construction Activities in accordance with Schedule 15 – Output Specifications to the Project Agreement. This certificate is effective as of [date].

Construction Contractor’s Statement

1. We certify that all the New MTO Infrastructure up to the effective date of this certificate has been designed, constructed, tested, and if applicable commissioned, and is in accordance with:

- i. the relevant Design Data and any Design Certificates issued to date in each case to which there has been no objection under the Review Procedure;
- ii. Applicable Law and Good Industry Practice; and
- iii. the provisions of the Project Agreement, including all applicable Design and Construction Specifications [as amended by the following Variation(s): [.....]].

with the exception of:

- i **[Non-Conformance Report(s) in “open” status]**

Signed: _____

[Construction Contractor representative]

Name: _____

Date: _____

Design Team’s Statement

2. We certify that we have examined the New MTO Infrastructure up to the effective date of this certificate in accordance with the requirements for examination of the Works contained in the Design Quality Management Plan and the Construction Quality Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such examinations, and that in our professional opinion the New MTO Infrastructure and exception(s) stated in the Construction Contractor’s Statement above has been designed, constructed, tested and commissioned, as applicable, and is in accordance with:

- i. the relevant Design Data and any Design Certificates issued to date in each case to which there has been no objection under the Review Procedure;
- ii. Applicable Law and Good Industry Practice; and
- iii. the provisions of the Project Agreement, including all applicable Design and Construction Specifications [as amended by the following Variation(s): [.....]].

Signed: _____

[Design Team (principal)]

Name: _____

Title: _____

Date: _____

Professional Registration Number: _____

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____

Receipt of this Certificate is acknowledged.

Signed: _____

Independent Certifier

Name: _____

Title: _____

Date: _____

Certificate Ref. No. []

MTO CONSTRUCTION CERTIFICATE (COMPLETION)

Project Agreement between the City and DB Co dated [●] (“the Project Agreement”) relating to the Project. Defined terms and expressions used in this certificate have the meanings given in the Project Agreement.

This form of certificate is to be used by the Design Team, Construction Contractor and DB Co for certifying in accordance with Section 3.1(d) of this Appendix B to Schedule 10 – Review Procedure, the Construction Activities in accordance with Schedule 15 – Output Specifications to the Project Agreement.

Construction Contractor’s Statement

1. We certify that [name(s) and element(s) of the New MTO Infrastructure] [the New MTO Infrastructure in respect of Handover] has been designed, constructed, [commissioned and tested] and has met the requirements for [Handover] in accordance with: *[Note to Proponents: Inapplicable language to be deleted.]*

- i. the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure;
- ii. Applicable Law and Good Industry Practice; and
- iii. the provisions of the Project Agreement, including all applicable Design and Construction Specifications [as amended by the following Variation(s): [.....]].

Signed: _____

[Construction Contractor representative]

Name: _____

Date: _____

Design Team’s Statement

2. We certify that we have examined the [name(s) and element(s) of the New MTO Infrastructure] [the New MTO Infrastructure in respect of Handover] in accordance with the requirements for examination of the Works contained in the Design Quality Management Plan and the Construction Quality Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such examinations, and that in our professional opinion [the said element of the New MTO Infrastructure][the New MTO Infrastructure] has been designed, constructed, [commissioned and tested] and has met the requirements for [Handover] in accordance with: *[Note to Proponents: Inapplicable language to be deleted.]*

- i. the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure;
- ii. Applicable Law and Good Industry Practice; and
- iii. the provisions of the Project Agreement, including all applicable Design and Construction Specifications [as amended by the Variation(s) listed in paragraph 1.(iii) above].

Signed: _____

[Design Team (principal)]

Name: _____

Title: _____

Date: _____

Professional Registration Number: _____

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____

Receipt of this Certificate is acknowledged.

Signed: _____

Independent Certifier

Name: _____

Title: _____

Date: _____

ATTACHMENT 4

Certificate Form

Certificate Ref. No []

INDEPENDENT STRUCTURAL DESIGN CHECK CERTIFICATE

Defined terms and expressions used in this certificate have the meanings given in the agreement between the City and DB Co dated [●] (“the Project Agreement”) relating to the Project.

This form of certificate is to be used by the Independent Checking Team for certifying the design of structures incorporated in the New MTO Infrastructure, in accordance with Part B of Schedule 15-2 Schedule 15-2, Part 9 - Highway Works to the Project Agreement.

1. We certify that we have the requisite professional qualifications, skill and experience to perform an independent check of the Design Data referred to herein in accordance with the requirements of the Project Agreement.
2. We certify that we have performed an independent check (as required by the Project Agreement for Significant and Complex Structures) of the Design Data for [.....] [**Name of the Structure and list of all elements of the Structure included in the Design Data**] listed in the Schedule hereto and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such an independent check, and that in our professional opinion:

- i. the said Design Data meets performance expectations outlined in the Project Agreement, [**including Technical Appraisal Form**] No. [.....] dated [.....], as amended by the following:

[List, if any, the changes made and any addenda to the foregoing Technical Appraisal Form]; and
- ii. the design, methodologies and assumptions are consistent with Good Industry Practice.

SCHEDULE

[Include here drawing numbers and titles and reports, calculations, etc.]

Signed: _____

Independent Checking Team (principal)

Name: _____

Title: _____

Date: _____

Professional Registration Number: _____

Affix Professional Seal

Signed: _____

DB Co Representative

Name: _____

Date: _____