

DESIGN-BUILD AGREEMENT

AMONG

**HER MAJESTY THE QUEEN
IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA,
AS REPRESENTED BY THE MINISTER OF TRANSPORTATION AND INFRASTRUCTURE**

- and -

BC TRANSPORTATION FINANCING AUTHORITY

- and -

PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP

December 13, 2019

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DESIGN-BUILD AGREEMENT

THIS DESIGN-BUILD AGREEMENT dated as of December 13, 2019 is entered into:

AMONG:

**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF
BRITISH COLUMBIA**, as represented by the **MINISTER OF
TRANSPORTATION AND INFRASTRUCTURE**

(the “**Province**”)

AND:

BC TRANSPORTATION FINANCING AUTHORITY

(“**BCTFA**”)

AND:

PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP

(the “**Design-Builder**”)

WHEREAS:

- A. The Design-Builder has been retained by the Province to carry out the Project and the Project Work; and
- B. The rights and obligations among the parties with respect to the Project shall be governed by the terms and conditions set forth in this Agreement.

NOW THEREFORE in consideration of the covenants and agreements of the parties contained in this Agreement and other good and valuable consideration, the receipt and sufficiency of which are hereby expressly acknowledged by each of the parties hereto, the parties hereto covenant and agree as follows:

**PART 1
INTERPRETATION**

1.1 Definitions and Interpretation

This Agreement shall be interpreted and construed in accordance with the provisions set out in Schedule 1 [Definitions and Interpretation].

1.2 Governing Law

This Agreement is governed exclusively by, and is to be enforced, construed and interpreted exclusively in accordance with, the laws of British Columbia and the laws of Canada applicable in British Columbia, and the laws of British Columbia and the laws of Canada applicable in British Columbia are the proper law of this Agreement.

1.3 Submission to Jurisdiction

Where in accordance with this Agreement, including the Dispute Resolution Procedure, a particular matter is referred to Court, or a party may initiate a proceeding in Court, the Court, subject to applicable Laws, has exclusive jurisdiction to entertain and determine such matter or proceeding, and each of the parties irrevocably submits to the exclusive jurisdiction of the Court.

1.4 No Fettering of Province's Rights, Powers and Authority

- (a) Nothing in this Agreement or the other Province Project Documents fetters or otherwise interferes with or limits, or shall be construed to fetter or otherwise interfere with or limit, the rights, powers and authority of the Province or BCTFA or any minister (including the Minister), ministry (including the Ministry), agency, board, commission, corporation or other entity of the Province, including with respect to the development or application of government policy and including any right, power or authority to:
 - (i) enact, amend, repeal or replace any enactment or regulation made under any enactment;
 - (ii) exercise or refrain from exercising any power, authority, duty, function or discretion conferred under Laws; or
 - (iii) administer, apply and enforce Laws.
- (b) Except as expressly provided for in this Agreement, the Design-Builder is not entitled to claim or receive any compensation or other relief whatsoever as a result of anything described in any of Sections 1.4(a)(i) to (iii) inclusive.

1.5 Schedules

The Schedules to this Agreement are incorporated into and form part of this Agreement. Obligations of the parties set out in the Schedules are included in the obligations of the parties under this Agreement.

1.6 Language

The language of this Agreement is English. All communications, documents and information provided pursuant to or in connection with this Agreement must be entirely in English.

PART 2 GENERAL PROJECT TERMS

2.1 The Project

The Design-Builder shall:

- (a) provide, perform and carry out the Project Work:
 - (i) in accordance with and subject to the terms and conditions of this Agreement;
and

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- (ii) in accordance with the Proposal Extracts (provided that the Design-Builder acknowledges that the Proposal Extracts shall be in addition to and not in substitution for any terms, conditions, requirements, criteria and specifications set out in this Agreement, including Schedule 4 [Design and Construction] or any other Project Requirements); and
- (b) perform and observe all other obligations for which it is responsible under this Agreement,

(collectively, the “**Project**”) at its own cost and risk and without recourse to the Province, BCTFA, public funds, or guarantees by the Province or any other Governmental Authority, except as expressly provided otherwise in, or to the extent the Design-Builder otherwise has rights arising out of or in respect of, this Agreement or any of the other Province Project Documents.

2.2 Term

This Agreement shall take effect on the Effective Date and, except as expressly provided otherwise in this Agreement, shall expire and terminate at the end of the Term.

2.3 Assumption of Risk and Responsibility

- (a) Except to the extent provided otherwise pursuant to the express provisions of this Agreement or any other Province Project Document, all risks, costs and expenses in relation to the performance by the Design-Builder of its obligations under this Agreement and the other Province Project Documents are allocated to, and accepted by, the Design-Builder as its entire and exclusive responsibility.
- (b) As between the parties, the Design-Builder shall be solely responsible for the selection, pricing and performance of all Subcontractors and other persons for whom the Design-Builder is in law responsible, and for the acts, defaults, omissions, breaches and negligence of all Subcontractors and any other persons for whom the Design-Builder is in law responsible, as fully as if such acts, defaults, omissions, breaches and negligence were those of the Design-Builder.

2.4 Financial Administration Act

The Design-Builder acknowledges that it is aware of the provisions of the *Financial Administration Act* (British Columbia).

2.5 Access to and Responsibility for Project Site

- (a) For the duration of the Access Period in respect of each part of the Project Site:
 - (i) subject to and in accordance with the terms and conditions of this Agreement, including the provisions of Schedule 8 [Lands] and the Conditions of Access, the Province and BCTFA agree to make such part available to the Design-Builder, on a non-exclusive basis in common with all persons identified in Section 4.7 [Access to Site and Project Infrastructure by Others] as having the right to access, for the Design-Builder, the Subcontractors, and any other person engaged or involved in the performance of the Project Work, and their respective

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representatives, agents, employees and contractors, and any other persons for whom the Design-Builder is in law responsible engaged or involved in the performance of the Project Work to enter upon and use such part and the Infrastructure located on such part as may be reasonably required from time to time to permit the Design-Builder to carry out the Project Work; and

- (ii) the Design-Builder shall assume all risk and responsibility for, and custody and control of, such part, save to the extent expressly provided otherwise in this Agreement.
- (b) Without prejudice to any rights of the Province or BCTFA that may have accrued during, or may accrue in respect of, the Access Period in respect of any part of the Project Site as a result of or in connection with the Design-Builder's obligations under this Agreement (including under Section 2.5(a)(ii)), on the date of expiry or termination of the Access Period in respect of such part, the Design-Builder's risk and responsibility for, and custody and control of, such part shall cease, provided that such cessation shall not relieve the Design-Builder of any obligations that relate to the Project Site or the performance of Project Work on the Project Site (or the part thereof that was subject to such cessation) that are, notwithstanding such cessation, applicable to the performance of Project Work thereon by the Design-Builder at such times as it has access thereto pursuant to Section 2.5(c).
- (c) To the extent permitted by, and subject to and in accordance with the Conditions of Access, after the date of expiry or termination of the Access Period in respect of any part of the Project Site, the Province and BCTFA shall, on terms and conditions determined by the Province and BCTFA, acting reasonably, provide access to such former part of the Project Site to the Design-Builder and the persons for whom the Design-Builder is in law responsible engaged or involved in the performance of the Project Work, to the extent necessary to enable the Design-Builder to perform any of its obligations under this Agreement after such date that are required to be carried out after such date.

2.6 Bonds

- (a) The Design-Builder shall purchase and deliver to the Province the Bonds in accordance with Section 2.17 [Execution and Delivery of Project Documents] and shall pay for and maintain in force the Bonds until the Substantial Completion Date.
- (b) If the surety notifies any party that the Bonds are or are going to be terminated or cancelled for any reason whatsoever, the Design-Builder shall obtain and provide the Province with valid Bonds effective from the date of termination or cancellation of the original Bonds that comply with the bonding requirements of this Agreement.
- (c) The Design-Builder shall, if required by the surety, obtain the written consent of the surety to any amendment of this Agreement and shall, upon request of the Province, provide confirmation from the surety of such consent or confirmation from the surety that such consent is not required.
- (d) For greater certainty, the amount of the Bonds and any claim under the Bonds will not limit the Province or BCTFA from seeking additional claims, damages or remedies the

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Province or BCTFA may be entitled to by reason of the Design-Builder's failure to successfully carry out the Project Work in accordance with the terms of this Agreement.

- (e) Upon entering into a Subcontract with a Subcontractor, the Design-Builder will advise the Subcontractor that a labour and materials payment Bond is in effect, will supply a copy of that Bond to the Subcontractor on request, and shall post and maintain copies of the labour and materials payment Bond at the Project Site.

2.7 Limited Use

- (a) During the Term, and without prejudice to any access rights of any such person as a member of the general travelling public, the Design-Builder shall not make any use of, or allow or authorize the Subcontractors, or any other person engaged or involved in the performance of the Project Work, or their respective representatives, agents, employees or contractors, to make any use of, the Project Site or the Project Infrastructure or any part thereof, except for the purposes of carrying out the Project Work in accordance with this Agreement and the other Project Documents.
- (b) Without limiting the generality of the foregoing, except as permitted by or pursuant to Section 2.8 [Business Opportunities], the Design-Builder shall not use or occupy or allow or authorize any person to use or occupy, for any commercial purpose, all or any part of the Project Site or the Project Infrastructure.

2.8 Business Opportunities

Except as otherwise agreed by the Province in its discretion, the Province reserves the right to all commercial and other opportunities for, or related to, the Project Facilities except for the commercial opportunity for the Design-Builder as represented by this Agreement.

2.9 Location of Project Facilities

The Design-Builder covenants and agrees that no part of the New Project Infrastructure shall be constructed or located on any lands that are not Project Lands or on any Project Lands that constitute, or are held by the Province or BCTFA by means only of, Temporary Land Rights.

2.10 Title to Infrastructure and Improvements

Except to the extent that title to any Plant has not passed to the Province or BCTFA, as applicable, in accordance with Section 2.12(a), and except for Project Intellectual Property or Background IP that is owned by the Design-Builder and licensed to the Province in accordance with Section 15.3 [Ownership of Intellectual Property and License to Province]:

- (a) the Design-Builder shall not acquire or have any interest in land or any other property or proprietary interest in or title to the Project Site or any Project Infrastructure, or any other improvements on or to the Project Site from time to time; and
- (b) as between the Province and BCTFA, and the Design-Builder, title to and ownership of the Project Site and the Project Infrastructure and all other improvements on or to the Project Site from time to time shall vest in the Province or BCTFA, such other person as the Province may direct, or the owner of the relevant lands, as applicable.

2.11 No Registration

The Design-Builder shall not register or attempt to register in any land title office this Agreement or any rights under this Agreement or any instrument, claim or notice in respect thereof.

2.12 Transfer of Title

- (a) As between the Province and BCTFA, and the Design-Builder, title to all Plant shall pass to and vest absolutely in the Province or BCTFA, such other person as the Province may direct or the owner of the relevant lands, as applicable, at the earlier of:
 - (i) title to the Plant being acquired by the Design-Builder; and
 - (ii) the Plant being affixed to or incorporated into the Project Site or the Project Infrastructure,

provided that all testing applicable to such Plant shall have been completed in accordance with Schedule 7 [Quality Management] prior to such passing of title.

- (b) Title to any property (whether real or personal, tangible or intangible) not referred to in Section 2.12(a) that is or is to be transferred to or acquired by the Province or BCTFA or any other person from the Design-Builder pursuant to the terms of this Agreement shall pass to the Province, BCTFA or such other person, as applicable, at the time of the transfer or acquisition as contemplated by this Agreement.
- (c) Without limiting the provisions of Section 18.7 [Further Assurances], the Design-Builder shall, at the written request of the Province from time to time, execute and deliver to the Province, BCTFA or to such other person as the Province may direct, and cause the Subcontractors with which the Design-Builder has contracted directly to execute and deliver to the Province, BCTFA or such other person as the Province may direct, all such bills of sale and other documents as the Province shall reasonably request for transferring rights in or title to property (whether real or personal, tangible or intangible) or confirming the transfer of rights in or title to any such property, as contemplated by this Section 2.12.
- (d) The Design-Builder covenants that the Subcontracts to which the Design-Builder is a party shall contain a provision imposing on the Subcontractor thereunder the same obligation to execute and deliver bills of sale and other documents as is imposed on the Design-Builder under Section 2.12(c).
- (e) Notwithstanding the passage to the Province, BCTFA or such other person as the Province may direct of rights in or title to Plant as provided above in this Section 2.12, the Design-Builder, the Subcontractors shall be entitled to make use of such Plant for the purposes of carrying out the Project Work subject to and in accordance with this Agreement.

2.13 Review, Approval, Inspection and Audit by the Province

- (a) If any review, approval, inspection, examination, audit, Quality Audit, testing, determination, acceptance, certificate, certification, permission, consent, comment or

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objection is provided, performed or made by or on behalf of the Province or BCTFA or the Province's Representative under, pursuant to, or in respect of, this Agreement or any of the other Project Documents, whether pursuant to the Review Procedure or the Consent Procedure or otherwise, or if no comment or objection is made by the Province, BCTFA or the Province's Representative pursuant to the Review Procedure or the Consent Procedure or otherwise:

- (i) such review, approval, inspection, examination, audit, testing, determination, acceptance, certificate, certification, permission, consent, comment or objection, or lack of comment or objection, shall be for assessment by the Province or BCTFA or the Province's Representative of general compliance by the Design-Builder with its obligations under this Agreement or the other Project Documents only;
- (ii) notwithstanding any other provisions of this Agreement or any of the other Project Documents, no such review, approval, inspection, examination, audit, testing, determination, acceptance, certificate, certification, permission, consent, comment or objection, or lack of comment or objection, now or in the future, and whether or not involving any negligent act or negligent omission or error on the part of the Province or BCTFA or the Province's Representative or any person for whom the Province is in law responsible:
 - (A) shall relieve or exempt or be deemed to relieve or exempt the Design-Builder or any other person for whom the Design-Builder is in law responsible from any of its obligations and liabilities under this Agreement or any other Province Project Document or at law or in equity, except in the circumstances and to the extent expressly provided in Section 2.13(b);
 - (B) shall constitute a waiver or release or be deemed to be a waiver or release by the Province or BCTFA of any duty or liability owed by the Design-Builder or any other person to the Province or BCTFA, or of any indemnity given by the Design-Builder to the Province or any Province Indemnified Person under this Agreement or any other Province Project Document, except in the circumstances and to the extent expressly provided in Section 2.13(b);
 - (C) shall create or impose or be deemed to create or impose any requirement, liability, covenant, agreement or obligation on the Province or BCTFA, except to the extent expressly set out in this Agreement as a consequence of the review, approval, inspection, examination, audit, testing, determination, acceptance, certificate, certification, permission, consent, comment or objection, or lack of comment or objection; or
 - (D) shall entitle or be deemed to entitle the Design-Builder to make any Claim against the Province or BCTFA for, or to recover from the Province or BCTFA, any Losses, except to the extent expressly set out in this Agreement; and

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- (iii) any decision so made by the Province under the Review Procedure or the Consent Procedure shall, once all applicable disputes arising in respect thereof have been resolved in accordance with Schedule 2 [Representatives, Review Procedure and Consent Procedure], be final, subject only to being opened up, reviewed or revised by the Province in its discretion if errors or further relevant facts are revealed after the decision has been made.

At the request of the Province from time to time, the Design-Builder shall obtain from the Key Individuals and any other person identified by the Province, acting reasonably, prior to any such party carrying out any part of the Project Work, waivers of liability substantially on the terms of this Section 2.13(a) in favour of the Province, BCTFA and the Province's Representative and in form and substance satisfactory to the Province.

- (b) If any consent, approval, acceptance, certification, determination or other permission of, or review, inspection, examination, audit or testing by, the Province or BCTFA or the Province's Representative is expressly required under this Agreement or any other Province Project Document in order for any specific act or conduct of the Design-Builder to be in compliance with (or not in breach of) any provision of this Agreement or any other Province Project Document, and if such consent, approval, acceptance, certification, determination or other permission is given by, or review, inspection, examination, audit or testing is carried out by, the Province or BCTFA or the Province's Representative (as the case may be) in any particular circumstance, the Design-Builder shall be relieved of the obligation under this Agreement or other Province Project Document to obtain the specific consent, approval, acceptance, certification, determination or other permission given, or to have the review, inspection, examination, audit or testing carried out, but only for the purposes and in the particular circumstances in which it was given or carried out and to which it applied.

2.14 Site Inspection and Investigations

- (a) The Design-Builder represents and warrants to the Province and BCTFA and agrees with the Province and BCTFA that the Design-Builder shall be deemed to have:
 - (i) been afforded the opportunity prior to executing this Agreement to inspect and examine all lands that will become the Project Site and their surroundings, and all existing Infrastructure in, on, over or under such lands, and inspected and examined the same and to have satisfied itself with respect thereto;
 - (ii) satisfied itself prior to executing this Agreement as to:
 - (A) the structural, geotechnical, geological, climatic, hydrological, ecological, environmental and general condition of the lands that will become the Project Site and all Infrastructure thereon, the form and nature thereof, and the nature of the ground and subsoil thereof, the risk of injury or damage to property adjacent to or in the vicinity of such lands, and to occupiers of such property, the nature of the materials (whether natural or otherwise) to be excavated, and the nature of the design, work, plant and materials necessary for the execution of the Project Work;

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- (B) any effect the condition of soils, including the presence of weak and compressible soils underlying the lands that will become the Project Site, may have on the performance of the Design and the achievement of the Design Life of the Project Infrastructure (to the extent to be constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work) as contemplated by Schedule 4 [Design and Construction];
 - (C) the adequacy of the lands that will become the Project Site and the Land Rights in such lands for the performance of Project Work and the performance by the Design-Builder of all of its other obligations under this Agreement;
 - (D) the means and methods of communication with the various parts of, and access to and through, the lands that will become the Project Site, the accommodation it may require and the adequacy and sufficiency of the rights of access and use and occupation provided by Section 2.5 [Access to and Responsibility for Project Site] and Schedule 8 [Lands] for the purposes of performing the Project Work, including the means and methods of coordination and implementation of such communication, access, use and occupation;
 - (E) the possibility of interference by third parties, including members of the public, with access to or use of the lands that will become the Project Site, and the Infrastructure thereon, with particular regard to the Requirements of Interested Parties;
 - (F) the precautions and times and methods of working necessary to minimize any nuisance or interference, whether public or private, being caused to any third parties in the performance of the Project Work; and
 - (G) any other contingencies, restrictions, conditions or constraints which would or might interfere with, limit or affect the ability of the Design-Builder to carry out the Project Work in accordance with the terms of this Agreement;
- (iii) reviewed and satisfied itself, prior to executing this Agreement, with respect to:
- (A) the terms of the OEEA, the Environmental Assessment Application, the Environmental Assessment Certificate and the Design-Builder's Environmental Obligations;
 - (B) the Indigenous Requirements;
 - (C) the Project Requirements, and that the Project Requirements are in compliance with the requirements of Sections 4.1(a) (save to the extent that the Project Requirements impose obligations on the Design-Builder to carry out and perform the Project Work to a higher standard than would be required to enable the Design-Builder to carry out and perform

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- the Project Work in accordance with Good Industry Practice), (b), (c), (e) and (f); and
- (D) the nature and extent (and that such nature and extent is adequate having regard to the Design-Builder's obligations under this Agreement) of all work carried out or to be carried out by, or by other contractors on behalf of, the Province, BCTFA, Utility Suppliers, the Municipality, Railways or others in connection with the Project or the Project Infrastructure or otherwise on or in the vicinity of the lands that will become the Project Site, and the impact of the conduct of such work on the carrying out of the Project Work;
- (iv) obtained for itself prior to executing this Agreement all necessary information as to:
- (A) the risks, contingencies and all other circumstances which may influence or affect the Project Requirements, the Design-Builder's Environmental Obligations or the Indigenous Requirements or its obligation to carry out the Project Work in accordance with the provisions of this Agreement; and
- (B) all other factors which would affect its decision to enter into this Agreement or the terms on which it would do so; and
- (v) conducted prior to executing this Agreement its own analysis and review of all materials, documents and data referred to in Section 2.15 [Disclosed Data] that bear on any of the matters referred to in Sections 2.14(a)(i) through (iv) inclusive.
- (b) The Design-Builder agrees with the Province and BCTFA that:
- (i) the Design-Builder accepts and will accept the Project Site and all existing Infrastructure thereon on an "as is, where is" basis;
- (ii) neither the Province nor BCTFA has made and does not hereby make any representation or warranty with respect thereto; and
- (iii) the Province and BCTFA shall have no responsibility or liability for the structural, geological, geotechnical, climatic, hydrological, ecological, environmental and general condition of the Project Site and all Infrastructure thereon, and the Design-Builder assumes and will assume any and all risk with respect to the structural, geotechnical, geological, climatic, hydrological, ecological, environmental and general conditions thereof and any and all risk that all or any part or parts thereof may not be suitable for the Project Infrastructure (to the extent to be constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work) or any Project Work.
- (c) For greater certainty, the Design-Builder shall be solely and wholly responsible for, and hereby accepts responsibility for, investigation, assessment and evaluation of and all risks associated with any and all surficial and sub-surface geotechnical and geological

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conditions or characteristics of the lands that will become the Project Site and any other lands, including any adjoining lands, or geotechnical or geological features which may in any way affect either directly or indirectly the design, construction, operation or use of the Project Infrastructure or any of its component parts.

The representations, warranties and agreements of the Design-Builder in this Section 2.14 shall not constitute an actionable representation, warranty or agreement by the Design-Builder in favour of the Province or BCTFA or give rise to a right of termination on the part of the Province or BCTFA, but the Province and BCTFA may rely on such representations, warranties, and agreements for the purpose of defending any action brought against the Province and BCTFA, or either of them, or any Claim by the Design-Builder for damages, Losses, extensions of time, additional compensation or any other relief, provided that no such representation, warranty or agreement shall prejudice an otherwise valid Claim by the Design-Builder:

- (d) pursuant to any other express provision of this Agreement or of any other Province Project Document; or
- (e) in respect of any breach of any express obligation of the Province or BCTFA under this Agreement or under any other Province Project Document.

The provisions of any of paragraphs (a) to (c) of this Section 2.14 do not limit the provisions of any other such paragraph of this Section 2.14.

2.15 Disclosed Data

- (a) Except as otherwise expressly provided in any other provisions of this Agreement, including Section 2.15(d), or as a result of any breach of any express obligation of the Province under this Agreement, neither the Province nor BCTFA shall have any liability to the Design-Builder (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligent act or negligent omission on the part of the Province or BCTFA or any person for whom the Province is in law responsible) in respect of any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy of any kind whatsoever in the Disclosed Data.
- (b) Neither the Province nor BCTFA gives or makes, has given or made or shall be deemed to have given or made, any representation, warranty or undertaking that the Disclosed Data represents or includes all of the information in its possession or control (either during the procurement process for the Project or at or after the date of execution of this Agreement) relevant or material to the Project, the Project Infrastructure, the Project Site or the obligations undertaken by the Design-Builder under this Agreement. Without limiting the generality of the foregoing, neither the Province nor BCTFA shall have any liability to the Design-Builder (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligent act or negligent omission on the part of the Province or BCTFA or any person for whom the Province is in law responsible) in respect of any failure to disclose or make available (whether before or after the execution of this Agreement) to the Design-Builder any information, documents or data, any failure to keep the Disclosed Data up to date, or any failure to inform the Design-Builder (whether before or after execution of this Agreement) of any inaccuracy, error, omission, unfitness for purpose, defect or inadequacy of any kind whatsoever in the Disclosed Data, except for any otherwise valid Claim by the Design-Builder:

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- (i) pursuant to any other express provision of this Agreement or of any other Province Project Document; or
 - (ii) in respect of any breach of any express obligation of the Province under this Agreement or under any other Province Project Document.
- (c) The Design-Builder acknowledges, represents, warrants and confirms that, without prejudice to its express rights under any other provisions of this Agreement, including Section 2.15(d):
- (i) the Design-Builder shall be deemed to have conducted prior to executing this Agreement its own investigations, examinations, interpretations, analysis and review of the Disclosed Data and to have satisfied itself as to the accuracy, completeness and adequacy of all such Disclosed Data which it has relied upon, adopted or made use of or intends to rely upon, adopt or make use of in carrying out the Project Work; and
 - (ii) the Design-Builder shall not be entitled to make, and shall not make, any Claim against the Province or BCTFA, whether in damages or for Losses or for extensions of time, compensation or additional payments or other relief, and whether under this Agreement or otherwise, and shall not be released from any risks or obligations imposed on or undertaken by it under this Agreement or any other Province Project Document, on any grounds relating to the Disclosed Data, including:
 - (A) on the grounds of any misunderstanding or misapprehension in respect of the Disclosed Data or any of the matters referred to in Section 2.14 [Site Inspection and Investigations] or Section 2.15(c)(i); or
 - (B) on the grounds that incorrect, insufficient or incomplete information relating to the Disclosed Data or to the Project Site or the Infrastructure thereon was given to it by any person (whether or not in the employ of the Province or BCTFA) including any person for whom the Province is in law responsible, the Municipality or any other Governmental Authority, except for an otherwise valid Claim by the Design-Builder:
 - (1) pursuant to any other express provision of this Agreement or of any other Province Project Document; or
 - (2) in respect of any breach of any express obligation of the Province or BCTFA under this Agreement or under any other Province Project Document.
- The provisions of any paragraph of this Section 2.15(c) do not limit the provisions of any other paragraph of this Section 2.15(c).
- (d) Notwithstanding the foregoing provisions of this Section 2.15 or any other provision of this Agreement, if a delay is caused to the progress of the Project Work or any additional costs are incurred by the Design-Builder in performing the Project Work during the Term that in either case would not otherwise have been experienced or incurred by the Design-

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Builder in performing its obligations under this Agreement, and such delay and/or costs are a direct result of an error in the Factual Geotechnical Data (as at the currency date of the relevant Factual Geotechnical Data) upon which the Design-Builder has reasonably and in accordance with Good Industry Practice relied in the design and construction of the Project Infrastructure, then such error in the Factual Geotechnical Data shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply. For greater certainty, the Design-Builder shall not be entitled to relief under this Section 2.15 if and to the extent that it was not, in all the relevant circumstances and having regard to any other information known to the Design-Builder at the relevant time, reasonable in accordance with Good Industry Practice for the Design-Builder to rely on the Factual Geotechnical Data containing the error or to rely on such Factual Geotechnical Data without further investigation or site examination.

2.16 Project Name and Project Marks

- (a) There is hereby reserved exclusively to the Province all rights to:
 - (i) name and rename from time to time the Project and the Project Facilities, and parts thereof; and
 - (ii) determine the names, branding, logos, domain names and other marks associated with the Project Work, the Project, the Project Facilities, the Website or other components of the Project as designated by the Province from time to time (collectively, the “**Project Marks**”).
- (b) In accordance with Section 15.4(a)(iii) but without limiting the right of each of the Design-Builder and any Subcontractor to identify itself and its role in the Project using its own names, marks and logos reasonably and in accordance with standard industry practice, the Design-Builder:
 - (i) shall, in association with the Project and all Project Work performed with respect to the Project, use only the Project Marks and shall not use any other names, branding, logos, domain names or other marks in association with the Project Work, the Project, the Project Facilities, the Website or other components of the Project without the prior written consent of the Province in its discretion;
 - (ii) agrees that its use of the Project Marks will at all times be under the control of the Province;
 - (iii) acknowledges the validity of the Project Marks and the Province’s interest in the Project Marks and all goodwill associated with or appurtenant to the Project Marks, and the Design-Builder further acknowledges and agrees that all use of the Project Marks by the Design-Builder will be deemed to be use by the Province and all the benefit and goodwill associated with such use will at all times, as between the Design-Builder and the Province, enure entirely to the Province;

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- (iv) will not do anything or omit to do anything that might impair, jeopardize, violate or infringe the Project Marks or the Province's interest in the Project Marks, including:
 - (A) opposing, contesting or in any other manner challenging the validity of the Project Marks or the Province's interest in the Project Marks; and
 - (B) claiming, using, displaying, reproducing or applying to register any trade mark, trade name, copyright or design that is identical to or confusing with any of the Project Marks, or that is derived from or based on any of the Project Marks;

and the Design-Builder will not assist, permit or encourage any other person or entity to do any of the foregoing; and

- (v) will not use, display, reproduce, register or attempt to register any of the Project Marks, or any words, designs, characters or symbols that are confusing with or are derived from the Project Marks, as part of any internet domain name, universal resource locator, telephone number, address, firm name, corporate name or any other designator.

2.17 Execution and Delivery of Project Documents

On or before the Effective Date:

- (a) the Design-Builder shall deliver to the Province and BCTFA the documents described in Part 1 [Documents to be Delivered by the Design-Builder] of Schedule 19, executed and delivered by the signatories specified or contemplated in such Part; and
- (b) the Province and BCTFA shall deliver to the Design-Builder the documents described in Part 2 [Documents to be Delivered by the Province and BCTFA] of Schedule 19, executed and delivered by the signatories specified or contemplated in such Part.

2.18 No Agency

- (a) The Design-Builder acknowledges that no provision of this Agreement shall be construed as a delegation to the Design-Builder by the Province, BCTFA, the Minister or any other person to whom a power, discretion or right has been conferred by Law to make a decision deciding or prescribing the legal rights, powers, privileges, duties or liabilities of a person, or the eligibility of a person to receive or to continue to receive a benefit or license (whether or not the person is legally entitled to it), of any power, authority, duty, function, right or discretion conferred under Laws.
- (b) Except to the extent (if any) that any provision in this Agreement expressly constitutes the Design-Builder the "agent" of the Province or BCTFA, the Design-Builder shall not be or be deemed to be or hold itself out as being an agent of the Province or BCTFA and the Design-Builder shall not hold itself out as having authority or power to bind the Province or BCTFA in any way.

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- (c) The Design-Builder acknowledges and agrees that neither the Province nor BCTFA has made any representation or warranty that the Design-Builder or any Subcontractor shall have the benefit of any Crown immunity.
- (d) Subject to Sections 2.18(a), (b) and (c) and the other provisions of this Agreement, the parties acknowledge that the Design-Builder is carrying out the Project Work at the request of the Province and BCTFA.

2.19 Province's Representative and Design-Builder's Representative

The parties acknowledge that:

- (a) the Province has appointed the Province's Representative as set out in Section 1.1(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure]; and
- (b) the Design-Builder has appointed the Design-Builder's Representative in accordance with Section 3.1(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure].

2.20 Community Benefits

The Design-Builder will carry out the Community Benefits Requirements in accordance with Schedule 21 [Community Benefits Requirements].

2.21 Interface Requirements

In addition to the obligations of the Design-Builder under this Agreement, the Design-Builder covenants and agrees to observe, perform and be bound by all the obligations of the Design-Builder contained in Schedule 18 [Interface Requirements].

2.22 [Not Used]

PART 3 GENERAL OBLIGATIONS OF PROVINCE

3.1 Mitigation By Province

- (a) In all cases where the Province or BCTFA is entitled under this Agreement to receive from the Design-Builder any compensation (including pursuant to Schedule 13 [Compensation on Termination]), costs, damages or other Direct Losses incurred by the Province or BCTFA (including by way of indemnity), any extension of time or any relief from performance, or any combination thereof, but not in any other case, each of the Province and BCTFA shall have a duty to use all reasonable efforts to mitigate and reduce the amount required to be paid by the Design-Builder to the Province or BCTFA, as the case may be, the length of the extension of time and/or the relief to be provided, provided that such duty shall not require the Province or BCTFA to:
 - (i) take any action which is contrary to the public interest, as determined by the Province or BCTFA in its discretion;

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- (ii) exercise or refrain from exercising any power, authority, duty, function, right or discretion conferred on the Province or BCTFA under Laws as a consequence of its status as the Crown, Crown agent or Crown corporation or as a legislative or public body and that is not conferred on a private commercial party;
 - (iii) undertake any mitigation measure that might be available arising out of its status as the Crown, Crown agent or Crown corporation or as a legislative or public body that would not normally be available to a private commercial party; or
 - (iv) alter the amount of any Province Payments or Performance Incentive Payments determined in accordance with Schedule 10 [Payment and Performance Mechanism]; or
 - (v) breach or act in a manner that could be inconsistent with the obligations of the Province or BCTFA under this Agreement.
- (b) Neither the Province nor BCTFA shall be entitled to receive those parts of any compensation, costs, damages or other Direct Losses incurred by the Province or BCTFA, as the case may be, or those parts of any extensions of time or other relief from performance, that the Province could have mitigated against, reduced or otherwise avoided by the exercise of all reasonable efforts, to the extent of the duty of the Province to do so in accordance with the provisions of Section 3.1(a).
- (c) The Design-Builder shall not be liable for any compensation, costs, damages or other Direct Losses to the extent suffered or incurred as a result of any Province Indemnified Person failing to mitigate to the same standard as is required of the Province under this Section 3.1.

3.2 Representations and Warranties of the Province and BCTFA

- (a) The Province represents and warrants to the Design-Builder, and acknowledges that the Design-Builder is relying upon such representations and warranties in entering into this Agreement, that, at the date of this Agreement, this Agreement has been duly authorized, executed and delivered on behalf of the Province by an authorized representative of the Minister of Transportation and Infrastructure.
- (b) BCTFA represents and warrants to the Design-Builder, and acknowledges that the Design-Builder is relying upon such representations and warranties in entering into this Agreement, that, at the date of this Agreement:
 - (i) all necessary corporate action has been taken by BCTFA to execute and deliver this Agreement; and
 - (ii) this Agreement has been duly authorized, executed, and delivered on behalf of BCTFA by an authorized representative of BCTFA.

3.3 Without Prejudice

Any covenant, representation, warranty or undertaking made or given by the Province or BCTFA under any provision of this Agreement is without prejudice to or limitation of any covenant,

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representation, warranty or undertaking made or given by the Province or BCTFA under any other provision of this Agreement.

3.4 Survival of Representations and Warranties

The representations and warranties made or given by the Province or BCTFA under any provision of this Agreement or in any certificate or other document delivered by or on behalf of the Province or BCTFA at the time of execution of this Agreement are given at the date of execution of this Agreement and shall, unless expressly provided otherwise, survive the execution and delivery of this Agreement and are not mitigated or affected by any investigation by or on behalf of the Design-Builder.

PART 4 GENERAL OBLIGATIONS OF DESIGN-BUILDER

4.1 Design-Builder to Carry Out Project Work

The Design-Builder shall carry out and perform the Project Work, and cause such Project Work to be carried out and performed:

- (a) in an efficient, effective, safe and good and workmanlike manner, and in accordance with Good Industry Practice;
- (b) in a manner that is not injurious to health and does not cause damage to property or the environment, provided that damage to property or the environment to the extent such damage is a reasonable consequence of performing such Project Work in accordance with this Agreement and in compliance with all other obligations of the Design-Builder hereunder will not constitute a breach of the obligation in this Section 4.1(b);
- (c) in compliance with all Requirements of Interested Parties; and
- (d) in accordance with all Project Requirements,

in each case subject to and in accordance with the provisions of this Agreement, and otherwise:

- (e) in a manner so as not to prevent the Province from exercising rights, powers and discretions and discharging duties and functions as a highway and/or transportation authority, and so as not to prevent the Province, BCTFA or any other Governmental Authority from exercising any other rights, powers and discretions or discharging any other lawful duties and functions; and
- (f) in compliance with all applicable Laws and Permits, all lawful and other proper instructions of the Police and all lawful and other proper requirements of Relevant Authorities and other Governmental Authorities.

4.2 Informational Rights

Without limiting any other obligation of the Design-Builder to provide notification to the Province of the occurrence of any event or circumstance in accordance with this Agreement, the Design-Builder shall provide to the Province's Representative promptly, and in any event within five Business Days following the date on which the Design-Builder becomes aware of the same:

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- (a) true and complete copies of any notices, complaints or orders (including directives and work orders) of violation or non-compliance or liability received by the Design-Builder or any of its Subcontractors from any Governmental Authority or any other person in respect of any matter relating to the Project, the Project Work, the Project Site or the Project Infrastructure;
- (b) a notice describing any fact, development, event or other matter of which the Design-Builder has become aware that could reasonably be expected to prevent the achievement of any or all of the Substantial Completion Date on or before the Substantial Completion Target Date and the Total Completion Date on or before the Total Completion Target Date;
- (c) a notice describing any litigation or other proceeding or Claim which has been commenced or threatened, or any event or occurrence which is reasonably likely to give rise to a Claim against any of the Design-Builder, a Subcontractor or the Province in respect of or relating to the Project;
- (d) a notice describing any proposal to suspend or abandon the Project or the Project Work;
- (e) a notice describing any material default or event of default of any party (including the Design-Builder) under any Project Document to which the Design-Builder is a party;
- (f) a notice describing any expropriation of any property or assets of the Design-Builder or comprising part of the Project Site or the Project Infrastructure; and
- (g) a notice of any discrepancy, error, omission, conflict, inconsistency or ambiguity in this Agreement, including the Project Requirements, of which the Design-Builder has become aware.

4.3 No Adverse Reflection

Without limiting the Design-Builder's obligations under Section 4.1 [Design-Builder to Carry Out Project Work], in the performance of the Project Work the Design-Builder shall not knowingly do or omit to do, or suffer or permit to be done or omitted, anything that might reasonably be expected to detract, or that the Province gives notice to the Design-Builder would detract, from the image and reputation of the Province as a highway and/or transportation authority or otherwise or the reputation of the Province or BCTFA, provided that any action taken or not taken in the course of performing the Project Work that is expressly required to be taken or not taken pursuant to this Agreement, a direction or instruction issued by the Province or a specific provision of the Project Requirements, will not constitute a breach of the Design-Builder's obligations under this Section 4.3(b), and provided that this Section 4.3(b) shall not prejudice an otherwise valid Claim by the Design-Builder:

- (a) pursuant to any other express provision of this Agreement or of any other Province Project Document; or
- (b) in respect of any breach of any express obligation of the Province or BCTFA under this Agreement or any other Province Project Document.

4.4 No Conflicts of Interest

- (a) The Design-Builder shall ensure that no conflict of interest arises between any other matter in which it or any of the Partners may be interested whether directly or indirectly, and the Design-Builder's performance of the Project, the Project Work and the obligations of the Design-Builder under this Agreement.
- (b) The Design-Builder:
 - (i) shall not knowingly admit to any share or part of this Agreement or any benefit to arise herefrom to any member of the Legislature of British Columbia or the House of Commons or the Senate of Canada;
 - (ii) shall ensure that no person for whom the Design-Builder is in law responsible is a current or former public servant or public office holder to whom any post-employment, ethics and conflict of interest legislation, guidelines, codes or policies of Canada applies shall derive any direct benefit from this Agreement unless the provisions or receipt of such benefits is in compliance with such legislation, guidelines, policies or codes; and
 - (iii) shall not make any payment to any individual required to be registered under the *Lobbying Act* (Canada) that is, in whole or in part contingent on the outcome of arranging a meeting between a public office holder and any other person, or communicating with a public office holder in the awarding of any grant, contribution or other financial benefit by or on behalf of the Federal Government.

4.5 Prohibited Acts

- (a) The Design-Builder covenants that neither the Design-Builder nor any of its agents or Subcontractors nor the employees of any of the aforementioned persons, nor any person for whom the Design-Builder is in law responsible, shall offer or give or agree to give any person in the service of the Province or BCTFA any gift or consideration of any kind as an inducement or reward for doing or forbearing to do or for having done or forborne to do any act in relation to the obtaining or execution of this Agreement or for showing or forbearing to show favour or disfavour in relation to this Agreement.
- (b) The Design-Builder covenants that it shall not enter into this Agreement or any other agreement with the Province or BCTFA in connection with which a commission, fee, payment or benefit has been paid or agreed to be paid by the Design-Builder or on behalf of the Design-Builder or to the knowledge of the Design-Builder, other than to any person for whom the Design-Builder is in law responsible, unless before such agreement is made particulars of any such commission, fee, payment or benefit and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to and consented to by the Province.
- (c) Without limiting Section 4.5(b), the Design-Builder covenants that no person for whom the Design-Builder is in law responsible shall enter into any agreement with the Province or BCTFA in relation to the Project in connection with which a commission, fee, payment or benefit has been paid or agreed to be paid by such person or on its behalf or

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to its knowledge, other than to any person for whom the Design-Builder is in law responsible, unless before such agreement is made particulars of any such commission, fee, payment or benefit and of the terms and conditions of any agreement for the payment thereof have been disclosed in writing to and consented to by the Province.

4.6 Public Use

(a) The Design-Builder shall keep open for public use at all times from and after they are made available to the Design-Builder for the purposes of the Project Work pursuant to Section 1.3 [Commencement of Access to Project Site] of Schedule 8 to the Substantial Completion Date, all parts of the Project Facilities that are open for public use as at the date they are made available to the Design-Builder for the purposes of the Project Work pursuant to Section 1.3 [Commencement of Access to Project Site] of Schedule 8, except for temporary or permanent lane closures or diversions of traffic flow instituted:

- (i) by the Design-Builder in accordance with the provisions of the Traffic Management Plan or any other provision of Schedule 4 [Design and Construction];
- (ii) by the Minister or any other Governmental Authority under the *Transportation Act* (British Columbia), the *Motor Vehicle Act* (British Columbia), the *Community Charter* (British Columbia) or any other Laws; or
- (iii) by the Police or fire, ambulance or other emergency services authorities,

and, except as otherwise expressly provided in this Agreement, the Design-Builder shall not have any Claim whatsoever against the Province, BCTFA, any Governmental Authority, the Police or any fire, ambulance or other emergency services authority for or in respect of the exercise of any such rights or powers or the discharge of any such duties or functions by any such authority affecting all or any part of the Project Site or the Project Infrastructure at any time.

- (b) The Design-Builder may not charge tolls or any other user charges for the use of the Project Facilities.
- (c) Subject to temporary and permanent closures or diversions of traffic flow with respect to the Project Facilities permitted by Sections 4.6(a)(i) to 4.6(a)(iii), the Design-Builder shall cause all Project Work to be carried on so as not to interfere unnecessarily with, and so as to minimize any necessary interference with, the convenience of the public in respect of, and the access of the public to and use of, any public or private streets, roads and highways other than the Project Facilities, whether under the control or in the possession of the Province, BCTFA or any other person.

4.7 Access to Project Site and Project Infrastructure by Others

The Design-Builder shall, subject to and in accordance with the health and safety procedures established by the Design-Builder pursuant to Section 4.13 [Health and Safety Program] and Section 4.14 [Design-Builder's Occupational Health and Safety Obligations] for the time being in force in relation to the relevant parts of the Project Site, ensure that at all times:

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- (a) the Province, BCTFA, the Province's Representative, the Federal Government and the Port Authority, and any contractors, consultants or other persons authorized by any of them, including Third Party Contractors, have access to the Project Site and the Project Infrastructure in accordance with Section 11.1 [Province Access];
- (b) the Province and BCTFA have access to the Project Site and the Project Infrastructure to fulfil any statutory, public or other duties or functions;
- (c) the Owner's Engineer and the Independent Engineer have access to the Project Site and the Project Infrastructure as reasonably required to carry out their respective responsibilities in respect of the Project in accordance with this Agreement;
- (d) inspectors and other persons authorized to act on behalf of the Province and BCTFA have access to the Project Site for inspection and acceptance purposes prior to the Total Completion Date, subject to reasonable notice being given to the Design-Builder;
- (e) the owners or operators of any Third Party Facilities and their employees, agents and contractors have unrestricted access to the Project Site and the Project Infrastructure at all reasonable times during the Access Period in respect of the applicable part of the Project Site, subject to reasonable notice being given by such persons to the Design-Builder, to install, operate, manage, maintain, repair, rehabilitate or reconstruct such Third Party Facilities, provided that, subject to the applicable requirements of Laws and the requirements of this Agreement, the Design-Builder may limit such access so as to not unnecessarily impede or restrict traffic flows or any Project Work being carried out by the Design-Builder;
- (f) all Relevant Authorities, Railways and Utility Suppliers have access to the Project Site and the Project Infrastructure throughout the Access Period in respect of the applicable part of the Project Site in order to carry out any work (including surveys and inspections) in accordance with or to exercise any right or power or perform any duty or obligation under any Laws, the Railway Agreements or the Utility Agreements, subject to reasonable notice being given by such Relevant Authority, Railway or Utility Supplier to the Design-Builder, and provided that, subject to the applicable requirements of the Relevant Authority, Railway, Utility Supplier or Laws and the requirements of this Agreement (as the case may be), the Design-Builder may limit such access so as to not unnecessarily impede or restrict traffic flows or any Project Work being carried out by the Design-Builder; and
- (g) without prejudice to any access rights of any such person as a member of the general travelling public, the Province, BCTFA, Third Party Contractors, owners or operators of Third Party Facilities, Relevant Authorities, Railways and Utility Suppliers are permitted to enter upon the Project Site and the Project Infrastructure for the purposes of access to and from any other lands or facilities adjacent to or in proximity to the Project Site and the Project Infrastructure (including any other street, road or highway) owned or operated by such person or in which such person has any interest, provided that, subject to the requirements of Laws and the requirements of this Agreement, the Design-Builder may limit such access so as to not unnecessarily impede or restrict traffic flows or any Project Work being carried out by the Design-Builder.

4.8 No Other Activity, Improvements or Change in Use

The Design-Builder shall not carry on any activity on, or make any changes or improvements to, all or any part of the Project Site or the Project Infrastructure or make any change in use of all or any part of the Project Site or the Project Infrastructure, except for the purposes of the Project Work as expressly required or permitted by, and subject to and in accordance with, the provisions of, this Agreement.

4.9 Design-Builder Submittals

Without limiting the obligations of the Design-Builder to comply with any other Project Requirements, including the preparation and delivery to the Province's Representative of any plans, submittals, programs, drawings, reports and other material, documents and information referred to in the Project Requirements, or any other obligations of the Design-Builder under this Agreement, the Design-Builder shall prepare, submit and, where applicable, comply with any and all plans, submittals, programs, drawings, reports and other material, documents and information set out or referred to in this Agreement or in any Schedule to this Agreement provided that, where the Design-Builder is required in accordance with this Agreement to submit any such plan, submittal, program, drawing, report or other material, document or information to the Province's Representative pursuant to the Review Procedure or the Consent Procedure, or otherwise for the consent, approval or acceptance of the Province, such compliance shall, notwithstanding any other provision of this Agreement, be with such plan, submittal, program, drawing, report or other material, document or information to which there has been "no objection" under the Review Procedure or which has been "accepted" under the Consent Procedure or which has otherwise been consented to, approved or accepted in writing by the Province, as the case may be.

4.10 Mitigation By Design-Builder

- (a) Without limiting and in addition to all other obligations to mitigate required by this Agreement or at law, in all cases where the Design-Builder is entitled under this Agreement to receive from the Province any compensation (including for any Supervening Event or pursuant to Schedule 13 [Compensation on Termination]) or any other costs, damages or other Direct Losses incurred by the Design-Builder (including by way of indemnity), any extension of time or any relief from performance, or any combination thereof, the Design-Builder shall have a duty to use all reasonable efforts to mitigate and reduce (which reasonable efforts may include by way of competitive procurement for expenditures (where appropriate in accordance with Good Industry Practice or otherwise required by Laws), rescheduling of works and deliveries, and reallocation or redeployment of labour forces and equipment, and pursuing recourse against insurers and third parties) the amount required to be paid by the Province to the Design-Builder, the length of the extension of time and/or the relief to be provided.
- (b) The Design-Builder shall not be entitled to receive those parts of any compensation, costs, damages or other Direct Losses incurred by the Design-Builder, or those parts of any extensions of time or other relief from performance, that the Design-Builder could have mitigated against, reduced or otherwise avoided by the exercise of all reasonable efforts as required in accordance with the provisions of Section 4.10(a).
- (c) Upon request from the Province, the Design-Builder shall promptly submit a detailed description, supported by all such documentation as the Province may reasonably

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require, of the measures and steps taken by the Design-Builder to meet its obligations under Section 4.10(a).

- (d) The Design-Builder shall require, where practicable, Subcontractors with which the Design-Builder contracts directly, to assume and carry out the same duty to mitigate as is required of the Design-Builder under Section 4.10(a), *mutatis mutandis*.
- (e) The Province shall not be liable for any compensation, costs, damages or other Direct Losses to the extent suffered or incurred as a result of any Subcontractor or other Design-Builder Indemnified Persons failing to mitigate to the same standard as is required of the Design-Builder under this Section 4.10.

4.11 Site Safety and Security

- (a) The Design-Builder shall at all times throughout the Term have full regard for the safety of all persons (including users of the Project Facilities) on the Project Site (whether lawfully or not) and shall during the Access Period (and any period during which access to any other area is made available to the Design-Builder pursuant to Section 2.5(c) or the Design-Builder otherwise has access) maintain the Project Site and any such other area in a manner and in an orderly state that ensures the safety of such persons and that is appropriate to the avoidance of danger to such persons.
- (b) Without limiting Section 8.8 [Responsibility for Participants and Trespassers] or any other provision of this Agreement, the Design-Builder shall during the Access Period (and any period during which access to any other area is made available to the Design-Builder pursuant to Section 2.5(c) or the Design-Builder otherwise has access) in respect of the Project Site and any such other area at all times take such measures as are reasonably required, including hoarding and fencing where appropriate, in respect of the Project Work being carried out by it to prevent the trespass and access onto the Project Site or such other areas of any persons not entitled to be there or of any creatures.
- (c) The Design-Builder shall take action in accordance with Laws to remove forthwith from the Project Site any person who engages in misconduct or is incompetent or negligent in the performance of any duties, or whose presence on the Project Site is otherwise undesirable.

4.12 Design-Builder as Prime Contractor

- (a) By entering into this Agreement, the Design-Builder agrees that:
 - (i) it is the Prime Contractor for the Project Site;
 - (ii) it shall at all times until the Substantial Completion Date be qualified to fulfil all functions and duties of the Prime Contractor as required under all Health and Safety Laws; and
 - (iii) it shall take all steps or measures necessary, through such arrangements as are appropriate, to fulfil all of its obligations, functions and duties as Prime Contractor in compliance with all Health and Safety Laws.

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- (b) Without limiting the Design-Builder's obligations to fulfill, as of and from the Effective Date until the Substantial Completion Date, all duties and functions of the Prime Contractor, the Design-Builder shall, by not later than 30 days after the Effective Date, and in any event before the commencement of any of the Project Work at the Project Site:
 - (i) designate a qualified coordinator (the "**Qualified Coordinator**") who shall be an individual qualified within the contemplation of the WCA and the OHS Regulation (including being knowledgeable of the Project Work, the hazards involved and the means to control the hazards, by reason of education, training, experience or a combination thereof) to discharge the responsibilities of a "qualified coordinator" as described in the WCA and the OHS Regulation; and
 - (ii) deliver to the Province's Representative:
 - (A) written notice of the designation of the Qualified Coordinator under Section 4.12(b)(i);
 - (B) a copy of the "notice of project" for the Project delivered in accordance with the WCA and the OHS Regulation; and
 - (C) written notice confirming that the Health and Safety Program has been initiated and is readily available in accordance with the WCA and the OHS Regulation.

4.13 Health and Safety Program

Notwithstanding any limitation in the OHS Regulation regarding the number of workers in any work force, the Design-Builder shall implement prior to mobilization by the Design-Builder to the Project Site a formal written health and safety program (the "**Health and Safety Program**") in respect of the Project Site that:

- (a) complies with Good Industry Practice and all Laws (including all applicable specifications and standards in Health and Safety Laws);
- (b) satisfies the requirements of Section 3.3 of Part 3 of the OHS Regulation;
- (c) is designed to prevent injuries and occupational diseases within the contemplation of the WCA and the OHS Regulation;
- (d) provides for the establishment and maintenance of a system or systems and a process or processes to ensure compliance with all Health and Safety Laws and to satisfy the Design-Builder's obligations in respect of occupational health and safety under this Agreement;
- (e) without limiting the foregoing, deals specifically with controlling the hazards of the Project Site, including such hazards as may be identified in hazard identifications provided in the Disclosed Data, and as such hazard identifications are updated by the Design-Builder from time to time throughout the Term; and

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- (f) satisfies and addresses all health and safety requirements contained in the Conditions of Access.

The Design-Builder shall update the Health and Safety Program as required from time to time to ensure that the Health and Safety Program at all times complies with the requirements of this Agreement, including this Section 4.13.

4.14 Design-Builder's Occupational Health and Safety Obligations

- (a) The Design-Builder shall at all times until the Substantial Completion Date:
 - (i) implement and maintain the Health and Safety Program;
 - (ii) observe and comply with, and ensure that the performance of the Project Work (including by conducting worker safety orientations, health and safety meetings, safety inspections and accident and incident investigations) complies at all times with, all Health and Safety Laws;
 - (iii) ensure that, in relation to the Project Work, all assessments, levies, penalties, fees and fines which may be made under any Health and Safety Laws are punctually paid as they become due; and
 - (iv) record, collect and retain all occupational health and safety Records, including notices, reports, directives and penalty assessments, in respect of the Project and the Project Work required by and in accordance with all Health and Safety Laws.
- (b) At the request of the Province from time to time, the Design-Builder shall:
 - (i) deliver to the Province's Representative evidence of the Design-Builder's implementation and maintenance of the Health and Safety Program in accordance with Section 4.13 [Health and Safety Program] and that a system or systems or a process or processes have been put into place to ensure compliance with Health and Safety Laws and to satisfy the Design-Builder's obligations in respect of occupational health and safety under this Agreement;
 - (ii) provide the Province's Representative with evidence satisfactory to the Province of compliance by the Design-Builder with its obligations in respect of Health and Safety Laws in accordance with this Agreement, including where applicable the compliance of the Design-Builder and its agents and Subcontractors and its or their directors, officers, employees and workers with all applicable Health and Safety Laws, including being registered, in good standing and current in respect of all assessments, levies, penalties, fees and fines thereunder; and
 - (iii) make available to the Province's Representative access to and copies of any Records maintained by the Design-Builder in accordance with the Health and Safety Program.
- (c) In the event of an accident or incident arising from performance of the Project Work that requires notification to the Workers' Compensation Board, the Design-Builder shall ensure that a copy of such notification is provided to the Province at the same time as the

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notification is delivered to the Workers' Compensation Board, and provide ongoing information to the Province on the progress of any investigation resulting from such notification, accident or incident.

4.15 Refusal to Recognize Design-Builder as Prime Contractor

If the Workers' Compensation Board refuses to recognize or accept the Design-Builder at any time as the Prime Contractor, including by making a declaration or determination to that effect, then:

- (a) the Design-Builder shall not be relieved of any obligations, duties and liabilities as Prime Contractor but shall be responsible to the Province and BCTFA and to those for whom the Design-Builder would have been responsible if the Design-Builder had been accepted or recognized by the Workers' Compensation Board as the Prime Contractor for fulfilling all obligations, duties and liabilities imposed on the Province or BCTFA or any contractor or subcontractor of any tier of the Province or BCTFA pursuant to Health and Safety Laws in the same manner and to the same extent and for the same purposes as if the Design-Builder undertook the obligations of a Prime Contractor for the Project Site at all times throughout the Access Period for the relevant portion of the Project Site (which obligations include, for greater certainty, the liability for any assessments, levies, penalties, fees or fines assessed, levied or charged from time to time against the Design-Builder or against the Province or BCTFA based on the number of employees employed in relation to the Project or otherwise); and
- (b) if the Workers' Compensation Board recognizes or accepts, including by making a declaration or determination to that effect, any Subcontractor as the Prime Contractor, then the Design-Builder shall not be considered to be in breach of this Agreement solely by reason of the refusal to accept the Design-Builder as the Prime Contractor or the declaration or determination by the Workers' Compensation Board to that effect, provided that and only to the extent that:
 - (i) the Design-Builder has not failed to observe, abide by or comply with any term of this Agreement;
 - (ii) such refusal to recognize or accept, or other declaration or determination, of the Workers' Compensation Board was for a reason other than a failure by any person, including for greater certainty by the Design-Builder, to discharge the duties as a Prime Contractor under the Health and Safety Laws;
 - (iii) the Design-Builder has not entered into a contract with any person, including any Subcontractor, under which that person has agreed to be the Prime Contractor in connection with the Project or any part of the Project Site and, for greater certainty, nothing in this paragraph prevents the Design-Builder from entering into such arrangements as are appropriate to fulfil its obligations as the Prime Contractor;
 - (iv) the Design-Builder indemnifies and holds harmless the Province and the Province Indemnified Persons, and each of them, in connection with any and all Direct Losses or (except only to the extent such Direct Losses are caused directly by a Province Non-Excusable Event) arising in connection with any matter contemplated under this Section 4.15 (including for greater certainty any

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assessments, levies, penalties, fees or fines assessed or charged against the Province and the Province Indemnified Persons, or any of them, based on the number of employees employed in relation to the Project or otherwise); and

- (v) the Design-Builder shall make, do, execute and cause to be made, done and executed all further and other acts, deeds, instruments, agreements and assurances as the Province or BCTFA may require for the performance of the Design-Builder's obligations as Prime Contractor in accordance with Section 4.12(a).

4.16 Appointment of other Prime Contractors by Province

- (a) Notwithstanding Section 4.13(a), there may be circumstances in which the Design-Builder will be required to perform parts of the Project Work under the direction of another Prime Contractor (in this Section 4.16, the "**Other Prime Contractor**") who has been appointed by the Province or BCTFA in connection with specified works and activities that may be undertaken and performed at any specified location or locations in the Project Site (in this Section 4.16, the lands and/or premises upon which the relevant parts of the Project Work are to be performed, the "**Separate Site**"). The Province shall provide prior written notice of any such circumstances, and shall notify the Design-Builder of the identity of the Other Prime Contractor, the location or locations of the Separate Site, the period of time in question and reasonable particulars of the work for which the Other Prime Contractor is in law responsible.
- (b) The Design-Builder agrees that, on receipt of written notice from the Province pursuant to Section 4.16(a), the Design-Builder shall cease to be the Prime Contractor in respect of such Separate Site for the specified period and shall at all times in good faith and at the cost of the Design-Builder:
 - (i) coordinate with and comply with the occupational health and safety requirements of the Other Prime Contractor while on the Separate Site, including requirements of the Other Prime Contractor to coordinate health and safety activities;
 - (ii) ensure compliance with the health and safety program of the Other Prime Contractor by the Design-Builder and all Subcontractors while on the Separate Site, including by developing a system to ensure such compliance and, upon the request of the Province, deliver to the Province evidence that such system is in place and being adhered to; and
 - (iii) coordinate the health and safety activities of the Other Prime Contractor while on the balance of the Project Site,

in each case to ensure at all times that the workers on the Separate Site do not create a hazard for the workers on the balance of the Project Site, and vice versa.

- (c) Upon receipt from the Province of written notice of the conclusion of the works and activities referred to in a notice delivered under Section 4.16(a), the Design-Builder shall reassume and thereafter fulfil the responsibilities of the Prime Contractor as otherwise set out in this Agreement at the Separate Site.

4.17 Notice of Failure to Comply with Health and Safety Requirements

- (a) In this Section 4.17, the terms “**employer**” and “**workers**” do not include the Design-Builder or any Subcontractor, or the employees of any of them.
- (b) If the Design-Builder determines in its reasonable discretion that any employer or its workers:
 - (i) has created an unsafe or harmful condition;
 - (ii) has done or omitted to do something that constitutes an unsafe or harmful act; or
 - (iii) has failed to comply with Health and Safety Laws or the Health and Safety Program,

and that, on written notice from the Design-Builder to the employer of such condition, act or failure, the employer has failed or refused to take action to correct the condition, act or failure, including any condition, act or failure of any of the employer’s workers, the Design-Builder may issue a notice (in this Section 4.17, a “**Notice of Failure to Comply**”) to the applicable employer stipulating in reasonable detail the basis for the issuance of the Notice of Failure to Comply, and shall deliver a copy of any Notice of Failure to Comply so issued to the Province.

- (c) Upon issuance of a Notice of Failure to Comply by the Design-Builder under Section 4.17(b), the Design-Builder may suspend all or any part of the Project Work at the location specified in the Notice of Failure to Comply if the Design-Builder believes such action is necessary to ensure that any risk to workers is eliminated or minimized, and shall provide to the Province, promptly and in reasonable detail, confirmation of all such action so taken by the Design-Builder in respect of such Notice of Failure to Comply.
- (d) Upon receipt of a copy of a Notice of Failure to Comply from the Design-Builder under Section 4.17(b), the Province may take whatever action in accordance with Section 11.5 [Province’s Other Step-In Rights] the Province deems necessary to ensure that any risk to workers is eliminated or minimized.
- (e) On rectification of the matter set out in a Notice of Failure to Comply, the Design-Builder shall withdraw such Notice of Failure to Comply by endorsing on a copy thereof confirmation of the rectification, and the Design-Builder shall deliver a copy of the endorsed Notice of Failure to Comply to the applicable employer and to the Province. If the Design-Builder suspended all or any part of the Project Work under Section 4.17(c), the Design-Builder shall resume such Project Work.
- (f) The Province shall be deemed to have relied on the terms of and the reasons set out in the Notice of Failure to Comply, notwithstanding any subsequent investigation or inquiry of the matter by the Province, which the Province may but will not be obligated to undertake, and the Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in connection with any and all Direct Losses or Claims (except only to the extent such Direct Losses or Claims are caused directly by a Province Non-Excusable Event) arising in connection with the

issuance of any Notice of Failure to Comply issued by the Design-Builder and any acts or omissions of the Province in reliance on such Notice of Failure to Comply.

4.18 Permits

- (a) The Design-Builder shall, or shall cause the Subcontractors, as the case may be, at its or their sole cost, to:
 - (i) obtain all Permits (excluding Province Permits) by the time required or contemplated by the terms of this Agreement to permit it to perform its relevant obligations hereunder;
 - (ii) renew, amend or extend, as applicable, all Permits (including Province Permits) by the time required or contemplated by the terms of this Agreement to permit it to perform its relevant obligations hereunder; and
 - (iii) comply with and maintain in good standing each Permit (including each Province Permit) in accordance with its terms, including complying with all requirements and obligations in respect of all Province Permits.
- (b) Where Permits that are the Design-Builder's obligation to obtain, renew, amend or extend under Section 4.18(a) have requirements that may impose any conditions, liabilities, obligations or costs on the Province or BCTFA or on any person other than the Design-Builder, the Subcontractors and other persons for whom the Design-Builder is in law responsible, the Design-Builder shall, prior to obtaining, renewing, amending or extending such Permits, seek the acceptance of the Province, acting reasonably, pursuant to the Consent Procedure, provided, however, that, except as provided in Section 2.2(f)(i) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], neither the Province nor BCTFA shall be responsible for obtaining or for any delay in obtaining or failure to obtain any such Permit, renewal, amendment or extension.
- (c) Where the Design-Builder, or any Subcontractor, as the case may be, is unable to apply for or to obtain, renew, amend or extend any Permit that is the Design-Builder's obligation to obtain, renew, amend or extend under this Section 4.18 without obtaining information or administrative assistance from the Province or BCTFA or without submitting the application for such Permit or renewal or extension in the name of the Province or BCTFA, each of the Province and BCTFA shall at the Design-Builder's cost and expense provide such information and administrative assistance as the Design-Builder may reasonably request and the Province or BCTFA, as the case may be, may reasonably be able to provide and, if requested, shall execute such applications as are required to be in its name to assist the Design-Builder or such Subcontractor, as the case may be, in obtaining, renewing, amending or extending such Permit.
- (d) The Design-Builder at its expense shall provide or cause to be provided such information, documentation and administrative assistance as may be requested by the Province and as the Design-Builder may reasonably be able to provide and, if requested, shall execute such applications as are required to be in its name, to enable the Province or BCTFA to apply for, obtain and (without limiting the Design-Builder's obligations under Section 4.18(a)) renew, amend or extend, and comply with and demonstrate compliance with requirements and obligations under, Province Permits.

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- (e) The Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in respect of any and all Direct Losses and Claims that the Province and the Province Indemnified Persons, or any of them, may suffer or incur in connection with or arising out of:
 - (i) the satisfaction and performance during the Term of all conditions, liabilities and obligations imposed on the Province or BCTFA by Permits obtained, renewed or extended by the Design-Builder in accordance with Section 4.18(b) and the payment of all costs in respect thereof;
 - (ii) the provision of information or administrative assistance by the Province or BCTFA and the execution of any applications by the Province or BCTFA in accordance with Section 4.18(c) and the payment of all costs in respect thereof, regardless of whether or not the Design-Builder ultimately is able to obtain, renew, amend or extend the relevant Permit as a result of the provision of such assistance or the execution of such applications by the Province or BCTFA;
 - (iii) any inability of the Province or BCTFA to obtain or, as applicable, renew or extend any Province Permit or any increased cost to the Province or BCTFA of obtaining or, as applicable, renewing or extending any Province Permit, as a result of any act or omission of the Design-Builder or any Subcontractor, or any other person for whom the Design-Builder is in law responsible; or
 - (iv) any cost to the Province or BCTFA of complying with any condition included in any Province Permit to the extent that such condition was included in the Province Permit as a result of any act or omission of the Design-Builder, any Subcontractor, or any other person for whom the Design-Builder is in law responsible.

4.19 Agreements with Governmental Authorities

- (a) The Design-Builder, subject to Section 4.19(b) but without limiting any other provision of this Agreement, shall enter into or cause to be entered into any agreement with any Governmental Authority or other person required in connection with the Project or to enable the Design-Builder to perform the Project Work in accordance with the terms of this Agreement, provided that, if either or both of the Province and BCTFA will be bound or affected in any way by any such agreement, the Design-Builder shall seek the consent of the Province to the terms of such agreement pursuant to the Consent Procedure (such consent not be unreasonably withheld) before entering into the agreement.
- (b) If the Province consents to either or both of the Province and BCTFA being a party or parties to any agreement referred to in Section 4.19(a), the Design-Builder shall assist the Province and/or BCTFA (as the case may be) in entering into such agreement; provided, however, that the Design-Builder shall not be relieved of any of its obligations under Section 4.19(a) or any other provision of this Agreement as a result of any such consent of the Province or assistance provided by the Design-Builder; and provided further that, if either or both the Province and BCTFA incurs or shall incur any liability or obligation under any such agreement, the form and substance of the agreement shall

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be subject to the prior approval of the Province and/or BCTFA (as the case may be) (which approval may be granted or withheld by the Province or BCTFA in its discretion) and, as between the Province and/or BCTFA (as the case may be) and the Design-Builder, unless otherwise agreed in writing by the parties, the Design-Builder shall discharge such liabilities and perform such obligations and shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in respect of any failure of the Design-Builder to discharge such liabilities or perform such obligations.

4.20 Archaeological and Heritage Objects

- (a) The Design-Builder shall carry out all archaeological surveys, inspections, impact assessments and other archaeological works specified as part of, and shall consult with archaeologists specified by the Province as required by, the Project Requirements.
- (b) As between the parties, all fossils, remains, coins, articles of value or antiquity and other objects having archaeological, artistic, historic or monetary interest or value, including all heritage objects (as defined in the *Heritage Conservation Act* (British Columbia)), that may be found on, at or in the Project Site or otherwise during the carrying out of the Project Work are and shall be, as between the Design-Builder and any Subcontractor on the one hand, and the Province on the other, the sole and absolute property of the Province.
- (c) Upon the discovery of any object referred to in Section 4.20(b) on, at or in the Project Site or otherwise during the carrying out of the Project Work, the Design-Builder shall:
 - (i) immediately inform the Province's Representative;
 - (ii) take all steps not to disturb the object and, if necessary, cease any Project Work in so far as performing such Project Work would or is reasonably likely to endanger the object or prevent or impede its excavation;
 - (iii) take all necessary steps to preserve the object in the same position and condition in which it was found; and
 - (iv) comply with all Laws and requirements of Governmental Authorities with respect to the discovery of such item, including pursuant to the *Heritage Conservation Act* (British Columbia),

and the discovery of such object and compliance by the Design-Builder with its obligations under this Section 4.20(c) shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply.

- (d) If the Province wishes the Design-Builder to perform procedures which are in addition to those required pursuant to Section 4.20(c) in respect of any object referred to in Section 4.20(b), then the Province shall request a Province Change pursuant to Section 7.1 [Province Changes] in respect of such additional procedures.

4.21 Representations and Warranties of Design-Builder

The Design-Builder represents and warrants to the Province and BCTFA, and acknowledges that the Province and BCTFA are relying upon such representations and warranties in entering into this Agreement and the other Province Project Documents, that at the Effective Date, based on the facts subsisting at the Effective Date:

- (a) the Design-Builder is a general partnership formed and validly existing under the laws of the Province of British Columbia and has full power and capacity to enter into and to carry out the transactions contemplated by, and to duly observe and perform all its obligations contained in, this Agreement and the other Project Documents to which it is a party, and all other documents, instruments and agreements required to be executed and delivered by the Design-Builder pursuant to this Agreement or such other Project Documents, and to carry out the Project Work;
- (b) CMI-HWY 91 Limited Partnership is a limited partnership formed and validly existing under the laws of the Province of British Columbia, and its sole general partner CMI-HWY 91 Design Build Ltd. is a corporation duly created and validly existing under the laws of the Province of British Columbia and has full power and capacity, as the general partner of CMI-HWY 91 Limited Partnership, to enter into and to carry out the transactions contemplated by, and to duly observe and perform all its obligations contained in, this Agreement and the other Project Documents to which the Design-Builder is a party, and all other documents, instruments and agreements required to be executed and delivered by the Design-Builder pursuant to this Agreement or such other Project Documents;
- (c) Aecon Infrastructure Management Inc. is a corporation duly created and validly existing under the laws of the Province of Alberta, and has full power and capacity to enter into and to carry out the transactions contemplated by, and to duly observe and perform all its obligations contained in, this Agreement and the other Project Documents to which the Design-Builder is a party, and all other documents, instruments and agreements required to be executed and delivered by the Design-Builder pursuant to this Agreement or such other Project Documents;
- (d) BelPacific Excavating & Shoring Limited Partnership is a limited partnership formed and validly existing under the laws of the Province of British Columbia, and its sole general partner Pacific Blasting & Demolition Inc. is a corporation duly created and validly existing under the laws of the Province of British Columbia and has full power and capacity, as the general partner of BelPacific Excavating & Shoring Limited Partnership, to enter into and to carry out the transactions contemplated by, and to duly observe and perform all its obligations contained in, this Agreement and the other Project Documents to which the Design-Builder is a party, and all other documents, instruments and agreements required to be executed and delivered by the Design-Builder pursuant to this Agreement or such other Project Documents;
- (e) the execution and delivery by CMI-HWY 91 Design Build Ltd., as the general partner of CMI-HWY 91 Limited Partnership, by Aecon Infrastructure Management Inc. and by Pacific Blasting & Demolition Inc., as the general partner of BelPacific Excavating & Shoring Limited Partnership, as the Partners of the Design-Builder, of this Agreement

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and the other Project Documents to which the Design-Builder is a party, and all other documents, instruments and agreements required to be executed and delivered by the Design-Builder pursuant to this Agreement or such other Project Documents, and the completion of the transactions contemplated by this Agreement and such other Project Documents, have been duly authorized by all necessary partnership and corporate action on the part of the Design-Builder and each Partner, and this Agreement, and each other Project Document to which the Design-Builder is a party and to be executed and delivered on or before the Effective Date, has been duly executed and delivered by each Partner, and constitutes a legal, valid and binding obligation of the Design-Builder and each Partner enforceable in accordance with its terms, except to the extent that the effectiveness of any enforcement action may be limited by bankruptcy, insolvency, liquidation, reorganization or similar laws of general application affecting creditors' rights generally and except that equitable remedies are in the discretion of the court, and subject to such other qualifications as are set out in the opinions of counsel delivered to the Province and BCTFA in accordance with Section 2.17 [Execution and Delivery of Project Documents];

- (f) the entry into and performance of this Agreement by the Design-Builder do not and shall not:
 - (i) conflict with its constating documents or the constating documents of any Partner or, if applicable, any Partner's general partner; or
 - (ii) conflict with any document which is binding upon it or any of the Partners or, if applicable, any Partner's general partner, or any of their respective assets to the extent that such conflict would have or be reasonably likely to have a material adverse effect on the performance by the Design-Builder of its obligations under this Agreement;
- (g) all agreements and consents of third parties required for the execution by each Partner of, and performance of the obligations of the Design-Builder and each Partner under, this Agreement and the other Project Documents to which the Design-Builder is a party, have been received, other than the Permits contemplated in this Agreement to be obtained in connection with the Project Work, agreements with Governmental Authorities to be entered into as contemplated by Section 4.19 [Agreements with Governmental Authorities] and agreements with Utility Suppliers to be entered into as contemplated by Section 4.10 [New and Amended Utility Agreements] of Part 1 of Schedule 4;
- (h) since the Financial Submittal Date:
 - (i) there has been no material reduction in the qualifications and expertise of the Design-Builder or any of the Partners to perform the Project Work; and
 - (ii) there has been no material adverse change in the financial condition of the Design-Builder or any of the Partners;
- (i) all statements, representations and information provided in the Proposal are correct and accurate in all material respects and did not omit any information required to make such statements, representations and information not misleading when taken as a whole,

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except to the extent the Design-Builder has in writing expressly advised the Province of any incorrectness or inaccuracy prior to the date of execution of this Agreement;

- (j) neither the Design-Builder, nor any of the Partners, has any knowledge of any fact that materially adversely affects or, so far as it can reasonably foresee, could reasonably be expected to materially adversely affect, either the financial condition of the Design-Builder or any of the Partners or the ability of the Design-Builder or any of the Partners to fulfil the Design-Builder's obligations under this Agreement or any of the other Project Documents to which the Design-Builder is a party;
- (k) neither the Design-Builder nor any of the Partners is a party to or, nor to its knowledge, threatened with any litigation or Claims that, if successful, would materially adversely affect the financial condition of the Design-Builder or any of the the Partners or the ability of the Design-Builder or any of the Partners to fulfil the Design-Builder's obligations under this Agreement or any of the other Project Documents to which the Design-Builder is a party;
- (l) the Partners are the only partners of the Design-Builder;
- (m) the information set out in Section 3.4 [Design-Builder Ownership Information] of Schedule 2 is true and accurate in all material respects;
- (n) the copies of the Material Subcontracts provided by the Design-Builder are true and accurate;
- (o) all of the Material Subcontractors and the Key Individuals are available to carry out their obligations under this Agreement in respect of the Project Work in accordance with this Agreement;
- (p) each of the Project Documents has been executed and delivered by all parties thereto other than the Province and BCTFA, the copies of the Project Documents that the Design-Builder has delivered to the Province and BCTFA are true and complete copies of such documents, and there are not in existence any other agreements or documents replacing or relating to any of the Project Documents which would materially affect the interpretation or application of any of the Project Documents;
- (q) neither the Design-Builder, nor any of the Partners or, if applicable, any of the Partners' general partners, nor any of the Subcontractors, nor the employees of any of them, nor any other person for whom the Design-Builder is in law responsible, has, prior to the Effective Date, done or caused to be done any of the matters or things referred to in Section 4.5 [Prohibited Acts]; and
- (r) neither the Design-Builder nor any of the Partners is currently subject to any charge, conviction, ticket, notice of defect or non-compliance, work order, pollution abatement order, pollution prevention order, remediation order or any other order or proceeding under any Environmental Laws that might reasonably be expected to have a material adverse effect on the performance by the Design-Builder and the Partners of the Design-Builder's obligations under this Agreement.

4.22 Without Prejudice

Any covenant, representation, warranty or undertaking made or given by the Design-Builder under any provision of this Agreement is without prejudice to or limitation of any covenant, representation, warranty or undertaking made or given by the Design-Builder under any other provision of this Agreement.

4.23 Survival of Representations and Warranties

All representations and warranties made or given by the Design-Builder under any provision of this Agreement or in any certificate or other document delivered by or on behalf of the Design-Builder at the time of execution of this Agreement are given at the date of execution of this Agreement and shall, unless expressly provided otherwise, survive the execution and delivery of this Agreement and the other Project Documents and are not mitigated or affected by any investigation by or on behalf of the Province or BCTFA.

PART 5 [NOT USED]

PART 6 INSURANCE, DAMAGE AND DESTRUCTION

6.1 Insurance Coverages

The Design-Builder shall take out, maintain in force, pay for and renew, or cause to be taken out, maintained in force, paid for and renewed, from Qualified Insurers, insurance for the Project as set out in Schedule 15 [Insurance Requirements] and in accordance with this Part 6, such insurance to be taken out at least five Business Days before, and so that it is in effect from, the commencement of the applicable period of time during which the insurance is required (and for clarity the insurance need not take effect until such commencement). The Design-Builder shall also take out, maintain in force, pay for and renew, or cause to be taken out, maintained in force, paid for and renewed, throughout the Term, from Qualified Insurers, all other insurance as may be required to be taken out from time to time in respect of all or any of the Project Work, the Project Site and/or the Project Infrastructure in accordance with any Laws or any Project Site Agreements and Project Site Encumbrances.

6.2 Province's Right to Insure

If the Design-Builder fails or refuses to obtain or maintain in force any Required Insurance, or to provide evidence of such insurance and renewals in relation thereto as and when required and in accordance with this Part 6, the Province shall, without prejudice to any of its other rights under this Agreement or otherwise, have the right (but not the obligation) itself to procure such insurance, in which event the Design-Builder shall pay to the Province on demand any amounts paid by the Province for that purpose together with an administrative fee equal to 15% of such amounts. Any administrative fee charged under this Section 6.2 shall not be in duplication of any administrative fee charged under Section 12.3(c) in respect of the same costs and expenses.

6.3 Particular Requirements of Policies

In addition to the requirements of Schedule 15 [Insurance Requirements] and without limiting the generality of the other provisions of this Part 6, the policies for the insurance required by Section 6.1 [Insurance Coverages] must comply with the following:

- (a) all policies of insurance must comply with Section 6.18 [Application of Proceeds of Insurance] and Schedule 15 [Insurance Requirements] as to the named insureds, additional named insureds, additional insureds and loss payees under such policies, as applicable;
- (b) all policies must be issued in the English language and governed by the laws of British Columbia and the laws of Canada applicable therein, or such other laws as may be acceptable to the Province in its discretion; and
- (c) all policies of insurance under which the Province or BCTFA is insured or is required to be insured must contain an endorsement to the effect that the policies will not be invalidated and coverage thereunder will not be denied for the Province or BCTFA or any other insureds (other than the Design-Builder, the Design-Builder Indemnified Persons and persons for whom the Design-Builder is in law responsible) by reason of any breach or violation of warranties, representations, declarations or conditions contained in the policies by the Design-Builder, any of the Design-Builder Indemnified Persons, or any person for whom the Design-Builder is in law responsible.

6.4 Deductibles

If any policies for the Required Insurance or any other insurance required to be taken out by Section 6.1 [Insurance Coverages] provide that the amount payable in the event of any claim, loss or liability shall be reduced by a deductible amount or subject to a waiting period, then the Design-Builder shall be responsible for any such deductible amount and/or waiting period and, in the event of any claim, loss or liability, the Design-Builder shall be responsible for and shall pay, and shall indemnify and hold harmless the Province and the Province Indemnified Persons and each of them in respect of, the amount not paid by the insurer to any of them as a result of any such deductible amount and/or waiting period.

6.5 Design-Builder Insurance Primary

The Design-Builder must ensure that all the Required Insurance is primary and not excess to any insurance of the Province or BCTFA, or any of the other additional named insureds, and does not require the sharing of any loss by the Province or BCTFA, or by any insurance of the Province or BCTFA.

6.6 Release of the Province for Insured Loss

- (a) Subject to Section 6.6(b), the Design-Builder, for itself and its successors and assigns, hereby releases the Province and BCTFA and those persons for whom the Province is in law responsible, and their successors and assigns, from any and all financial liability for:
 - (i) damage to any property or any other loss required to be insured by the Required Insurance or actually insured by the Design-Builder or any Subcontractor (whether or not required to be insured by the Required Insurance); and

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- (ii) any delay in start up, business interruption, extra expense, loss of income and loss of profit related thereto;

caused by any of the perils against which the Design-Builder or any Subcontractor has insured or against which by the terms of this Agreement the Design-Builder is required to insure or to procure insurance, and whether or not such loss or damage may have arisen out of any act, omission or negligence of the Province or BCTFA or any person for whom the Province is in law responsible.

- (b) The release in Section 6.6(a) shall not apply to the extent that both:
 - (i) the Province would, but for Section 6.6(a), be liable under this Agreement in respect of the damage to property or other loss required to be insured by the Required Insurance; and
 - (ii) the amount of the relevant loss exceeds the amount of insurance required to be obtained under Schedule 15 [Insurance Requirements] in respect of such property or other loss.

6.7 Compliance with Policies

- (a) The Design-Builder shall comply with the terms, conditions and requirements of all policies for the Required Insurance, shall not do or omit to do, or permit to be done or omitted by any person for whom the Design-Builder is in law responsible or, insofar as it is within its power or the power of any of its Subcontractors, any other person (other than the Province, BCTFA and persons for whom the Province is in law responsible), anything on or with respect to the Project Site or the Project Infrastructure or with respect to the Project Work that could result in or could reasonably be expected to result in the cancellation of any Required Insurance or that would entitle any insurer to refuse to pay any claim under the policy for any Required Insurance or that would diminish the value of any claim under the policy of Required Insurance.
- (b) Provided the Province has been provided with copies of the policies of Required Insurance, neither the Province nor BCTFA shall do, or permit to be done by any person for whom the Province is in law responsible, anything on or with respect to the Project Site or the Project Infrastructure (excluding lawful acts of the Province or BCTFA required or permitted under this Agreement) that could result in or reasonably be expected to result in the cancellation of any Required Insurance or that would entitle any insurer to refuse to pay any claim under the policy for any Required Insurance or that would diminish the value of any claim under the policy of Required Insurance.

6.8 Evidence of Insurance

- (a) The Design-Builder shall provide to the Province's Representative at least 10 Business Days before the Effective Date, drafts of a cover note and a certificate of insurance for each policy for the Required Insurance. Each cover note and certificate of insurance must be in a form and to be signed by an authorized signatory of the insurers or of the insurers' insurance broker or insurance intermediary satisfactory to the Province, and must be sufficient to confirm the insurance and the terms and conditions thereof, as

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required by this Agreement, and, for such purposes, the Design-Builder shall cause the cover note and the certificate of insurance to be revised as the Province may require.

- (b) At least five Business Days before the Effective Date, the Design-Builder shall deliver to the Province's Representative, for each policy for any Required Insurance, the cover note and certificate of insurance for the policy, as provided in draft to the Province's Representative pursuant to Section 6.8(a), and as revised as required by the Province pursuant to Section 6.8(a), signed by an authorized signatory of the insurers or of the insurers' insurance broker or insurance intermediary satisfactory to the Province, confirming that the insurance has been obtained and will on or before the required date be in full force and effect, in each case together with:
 - (i) evidence satisfactory to the Province that the deposit premiums payable therefor have been paid; and
 - (ii) where the premium for any policy is not fully paid prior to such date, a statement to that effect certified by the Design-Builder setting out the due dates for payment of the remaining premiums and the amount payable on each due date.
- (c) Not later than five Business Days after each due date referred to in Section 6.8(b)(ii), the Design-Builder shall provide to the Province's Representative evidence satisfactory to the Province that the premiums due on that due date have been paid and that the insurance has not been cancelled and is not susceptible to cancellation for non-payment of such premiums.
- (d) The Design-Builder shall provide to the Province's Representative certified copies of all policies of insurance, certified by the insurer or its agent, within 90 days after the date the insurance is required to be in effect under this Agreement.
- (e) The Design-Builder shall provide such additional evidence of compliance with this Part 6 as may be requested by the Province from time to time.

6.9 Renewal

- (a) At least 10 Business Days before the expiration or cancellation of any policy for any Required Insurance, unless such policy is no longer required by the terms of this Part 6 and Schedule 15 [Insurance Requirements], the Design-Builder shall provide to the Province's Representative drafts of a cover note and a certificate of insurance for the renewal or replacement of such policy. Each cover note and certificate of insurance must be in a form and to be signed by an authorized signatory of the insurers or of the insurers' insurance broker or insurance intermediary satisfactory to the Province, and must be sufficient to confirm the insurance and terms and conditions thereof, as required by this Agreement, and, for such purposes, the Design-Builder shall cause the cover note and the certificate of insurance to be revised as the Province may require.
- (b) At least five Business Days before the expiration or cancellation of any policy to be renewed or replaced as provided in Section 6.9(a), the Design-Builder shall deliver to the Province's Representative, for each such policy, the cover note and certificate of insurance for the renewal or replacement of the policy, as provided in draft to the Province's Representative pursuant to Section 6.9(a), and as revised as required by the

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Province pursuant to Section 6.9(a), signed by an authorized signatory of the insurers or of the insurers' insurance broker or insurance intermediary satisfactory to the Province, confirming that the insurance has been obtained and will be in full force and effect at or before the time of expiry or cancellation of the policy being renewed or replaced, in each case together with:

- (i) evidence satisfactory to the Province that the deposit premiums payable therefor have been paid; and
 - (ii) where the premium for the renewal or replacement of any policy is not fully paid prior to the expiration or cancellation of any policy to be renewed or replaced, a statement to that effect certified by the Design-Builder setting out the due dates for payment of the remaining premiums and the amount payable on each due date.
- (c) Not later than five Business Days after each due date referred to in Section 6.9(b)(ii), the Design-Builder shall provide to the Province's Representative evidence satisfactory to the Province that the premiums due on that due date have been paid and that the insurance has not been cancelled and is not susceptible to cancellation for non-payment of such premiums.

6.10 Copies of Communications

At the time the Design-Builder provides to the Province's Representative any submittal, notice or other communication with respect to insurance under this Part 6 or Schedule 15 [Insurance Requirements], the Design-Builder shall at the same time provide a copy of such submittal, notice or other communication and a copy of all documents and enclosures therewith, to "The Corporate Insurance and Bonds Manager" at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN Prov Govt, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise).

6.11 Review of Insurance by Province

Without limiting Section 2.13 [Review, Approval, Inspection and Audit by the Province], the submission or delivery to the Province's Representative, and the receipt, review, approval or acceptance by the Province or the Province's Representative of any insurance policy or any draft or certified copy of an insurance policy or any certificate of insurance, cover note or other evidence of compliance with this Part 6 and Schedule 15 [Insurance Requirements], shall not, irrespective of whether any objection is made thereto by the Province:

- (a) imply any acceptance by the Province or BCTFA that the extent of the insurance coverage is sufficient or that the terms and conditions thereof are satisfactory, in either case for the purposes of the Project or this Agreement; or
- (b) relieve or exempt or be deemed to relieve or exempt the Design-Builder or any other person from any of its obligations and liabilities under this Agreement or any of the other Province Project Documents or at law or in equity including its obligations to insure as provided in this Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements]; or

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- (c) derogate from, limit or prejudice any rights of the Province under this Agreement.

6.12 Workers' Compensation Coverage

The Design-Builder shall at all times during the Term carry and pay for or cause to be carried and paid for full workers' compensation coverage of all workers, employees and others engaged in the performance of the Project Work. The Design-Builder shall, at the request of the Province from time to time, provide to the Province's Representative evidence satisfactory to the Province that such coverage is in effect and that all assessments payable under the WCA in respect of the Project have been paid.

6.13 Claims

- (a) The Design-Builder shall maintain a written register of all claims and incidents which might result in a claim under any of the policies of Required Insurance and shall allow the Province to inspect such register at any time on reasonable notice.
- (b) The Design-Builder shall in addition notify the Province within five Business Days after making any claim under any of the policies for the Required Insurance where the value of the claim exceeds \$25,000 or (regardless of the value of the claim) the claim involves bodily injury or death, accompanied by full particulars of the incident giving rise to the claim.
- (c) In the event of any claim or loss to which any Required Insurance may apply, the Design-Builder shall, and shall ensure that the relevant insured (other than the Province and BCTFA) shall, promptly and diligently notify all applicable insurers, file all required proofs of claim, supply to the insurers and adjusters all required documents and information, and generally execute and deliver all documents and do all acts and things that may be required to obtain the benefit of the insurance for the insureds thereunder including the additional named insureds and additional insureds.
- (d) Each party shall have the right, as its interest may appear, to be a party to and to participate in any claims settlement under any policy of property insurance insuring the Project Infrastructure or any part thereof required by this Agreement to be part of the Required Insurance, and to make and submit its own claim with respect to any loss or damage separately from any claim of any other party or any other person.

6.14 Insurance Not to Prejudice

Neither full compliance by the Design-Builder nor a failure to comply by the Design-Builder with the requirements of this Part 6 [Insurance, Damage and Destruction] shall derogate from, limit or prejudice any rights of the Province under this Agreement or relieve the Design-Builder from any of its other obligations or liabilities under this Agreement.

6.15 Restoration and Reinstatement of Damage or Destruction

Unless this Agreement is terminated in accordance with its terms (including under Section 8.6 [Termination for Force Majeure Event] or Section 8.7 [Termination for Damage or Destruction]), if all or any part of the Project Infrastructure or the Project Site is damaged or destroyed, the Design-Builder shall restore, replace and reinstate such damage or destruction (the "**Reinstatement Work**") promptly and in any event as soon as practicable in the circumstances. Except as otherwise expressly provided in this

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Agreement, damage to or destruction of all or any part of the Project Infrastructure or the Project Site shall not terminate this Agreement or relieve the Design-Builder of any of its obligations under this Agreement or entitle the Design-Builder to any compensation from the Province or BCTFA.

6.16 Reinstatement Plan

If all or any part of the Project Infrastructure or the Project Site is damaged or destroyed, in addition to the requirements of Section 8.6 [Termination for Force Majeure Event] or Section 8.7 [Termination for Damage or Destruction], if the Reinstatement Work is reasonably estimated to cost more than \$10,000,000 or in any other case where the Province, having regard to the nature of the damage or destruction, notifies the Design-Builder that a Reinstatement Plan is required (excluding where the damage or destruction occurs before the Total Completion Date and the Province considers that the continued application of the Design and Certification Procedure would be able to adequately address the Reinstatement Work without the need for a separate Reinstatement Plan), the Design-Builder shall, as soon as practicable and in any event within 20 Business Days after the occurrence of the damage or destruction or receipt of notification from the Province, as the case may be, (or if, with the exercise of all due diligence, more than 20 Business Days is reasonably required for such purposes, then within such longer period of time after the occurrence of such damage or destruction or receipt of notification from the Province, as the case may be, as may be reasonably required with the exercise of all due diligence, provided the Design-Builder exercises and continues to exercise all such due diligence) submit to the Province's Representative pursuant to the Consent Procedure a plan (a "**Reinstatement Plan**") prepared by the Design-Builder for carrying out the Reinstatement Work setting out, in reasonable detail, *inter alia*:

- (a) a description of the Reinstatement Work required to restore, replace and reinstate the damage or destruction (in accordance, where applicable, with any Province Change issued in respect thereof);
- (b) an estimate of the cost to carry out the Reinstatement Work and confirmation of whether or not there are sufficient funds available to the Design-Builder from all sources, including letters of credit, construction or other security, insurance proceeds, deductibles for which the Design-Builder is responsible in accordance with this Agreement, recourse against third parties, amounts required to be paid by the Province to the Design-Builder pursuant to Section 8.3(b) or otherwise under this Agreement, to allow the Design-Builder to complete the Reinstatement Work;
- (c) the Design-Builder's proposed schedule for the execution of the Reinstatement Work;
- (d) the proposed terms upon which the Reinstatement Work is to be effected and, if the Reinstatement Work is to be effected by a third party, the procurement procedure which the Design-Builder proposes to implement to procure the execution of the Reinstatement Work, provided that, if required by the Province in order to comply with applicable Competitive Procurement Requirements, the execution of the Reinstatement Work shall be procured through a competitive procedure designated by the Province and conducted under the supervision of the Province;
- (e) the Design-Builder's proposal for any amended Project Schedule and/or Works Schedule necessary to accommodate the proposed schedule for the execution of the Reinstatement

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Work (which proposal shall be dealt with in accordance with the provisions of Schedule 3 [Project Schedule], as applicable); and

- (f) the Design-Builder's proposal for any related amendment to the Traffic Management Plan required in connection with the execution of the Reinstatement Work;

and except to the extent necessary to address any emergency or public safety needs, the Reinstatement Work must not be commenced until the Reinstatement Plan has been accepted by the Province in accordance with the Consent Procedure.

6.17 Conduct of Reinstatement Work

The Design-Builder shall carry out the Reinstatement Work in accordance with the Project Requirements and all other applicable requirements under this Agreement and, where applicable, in accordance with the Reinstatement Plan accepted by the Province in accordance with the Consent Procedure. All designs, plans and specifications in respect of the Reinstatement Work shall be subject to the Design and Certification Procedure.

6.18 Application of Proceeds of Insurance

The Design-Builder shall ensure that the insurers under any of the policies of Required Insurance pay the proceeds of insurance under such policies as follows:

- (a) in the case of any policy for the insurance referred to in any of Sections 1.1 [Third Party Liability Insurance During Construction], 1.3 [Automobile Insurance] and 2.1 [Insurance – Operation and Maintenance] of Schedule 15, the proceeds of insurance shall be paid directly to the third party or, where any insured party has discharged the relevant liability to the third party prior to the payment of any relevant insurance proceeds, to the insured party who discharged the relevant liability;
- (b) in the case of any policy for the insurance referred to in Section 1.4(a) of Schedule 15 [Insurance Requirements] (excluding any delay in start up, extra expense, business interruption, loss of income or loss of profits insurance proceeds payable under any such policy), the proceeds of insurance shall be paid to the Province as first loss payee, except where:
 - (i) the Design-Builder has already Totally Completed the Reinstatement Work in respect of the damage or destruction that gave rise to the proceeds; or
 - (ii) the insurance proceeds payable in respect of any single claim made under the relevant insurance policy is equal to or less than \$15,000,000;

in either of which cases the Province shall direct that the proceeds be paid directly to the Design-Builder or the relevant insured; provided that, where the proceeds of any such insurance policy (other than any delay in start up, extra expense, business interruption or loss of profits insurance policy proceeds payable to the Design-Builder) are paid to the Design-Builder in respect of any single claim equal to or less than \$15,000,000, the Design-Builder shall ensure that such proceeds are applied to the Reinstatement Work in respect of the damage or destruction that gave rise to the proceeds and not for any other purpose; and provided further that, where the proceeds of such policies of insurance are

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payable in whole or in part to the Province pursuant to this Section 6.18(b) (such proceeds, together with any interest, distribution or other gain from time to time received by the Province in respect thereof are called the “**Property Damage Insurance Proceeds**”), then either Section 6.18(c) or Section 6.18(d) as applicable shall apply;

- (c) if the Design-Builder has, in accordance with the provisions of the relevant Reinstatement Plan, entered into a contract with a third party for the purpose of carrying out the Reinstatement Work in respect of the damage or destruction that gave rise to Property Damage Insurance Proceeds being paid by insurers to Province:
 - (i) if, in accordance with such contract, the Design-Builder is required to make a payment to such third party for such purpose, and if the Design-Builder submits to the Province’s Representative pursuant to the Review Procedure:
 - (A) a copy of an invoice from such third party to the Design-Builder for payment of the cost of such Reinstatement Work;
 - (B) such supporting documentation and detail as may be required by the Province with respect to the Reinstatement Work that is the subject of the invoice and the cost thereof including documents and information to establish and verify the applicable matters to be considered in accordance with Section 2.6 of Schedule 2 [Representatives, Review Procedure and Consent Procedure] in respect of the Reinstatement Work and the Property Damage Insurance Proceeds;
 - (C) standard Ministry evidence (or other evidence satisfactory to the Province) that the provisions of Section 5.10 [Compliance with *Builders Lien Act* and Payments to Contractors] of Schedule 8 and Section 6.12 [Workers’ Compensation Coverage] have been complied with in respect of the Reinstatement Work and that there are no outstanding builders’ liens or claims therefor in respect of such Reinstatement Work; and
 - (D) written confirmation of the Design-Builder addressed to the Province that the amount of the invoice is justly due and payable in accordance with the relevant contract and that the Design-Builder requires such invoice to be discharged out of the Property Damage Insurance Proceeds,

then the Province shall, not later than the later of:

- (E) the date that is five Business Days after the date on which there has been (or deemed to have been) no objection by the Province under the Review Procedure to the submittal referred to in Sections 6.18(c)(i)(A) to (D) inclusive; and
- (F) the date that is seven Business Days prior to the due date for payment of such invoice by the Design-Builder under the terms of the relevant contract,

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pay to the relevant third party, out of the Property Damage Insurance Proceeds paid to the Province on account of the damage or destruction to which the Reinstatement Work relates, an amount equal to the lesser of the amount of such Property Damage Insurance Proceeds paid to the Province and the amount of such invoice; and

- (ii) upon the issuance of a Certificate of Total Completion in respect of the Reinstatement Work pursuant to the Design and Certification Procedure, if the Design-Builder submits to the Province's Representative pursuant to the Review Procedure:
 - (A) a copy of the Certificate of Total Completion in respect of such Reinstatement Work;
 - (B) an invoice for payment to the Design-Builder of the balance (if any) of any such Property Damage Insurance Proceeds; and
 - (C) standard Ministry evidence (or other evidence satisfactory to the Province) that the provisions of Section 5.10 [Compliance with *Builders Lien Act* and Payments to Contractors] of Schedule 8 and Section 6.12 [Workers' Compensation Coverage] have been complied with in respect of the Reinstatement Work and that there are no outstanding builders' liens or claims therefor in respect of such Reinstatement Work,

the Province shall, subject to any specific requirements of the insurers, within five Business Days after the date on which there has been (or deemed to have been) no objection by the Province under the Review Procedure to the submittal referred to in Sections 6.18(c)(ii)(A) to (C) inclusive, pay to the Design-Builder the balance (if any) of the Property Damage Insurance Proceeds paid to the Province on account of the damage or destruction to which the Reinstatement Work relates;

- (d) if the Design-Builder itself, in accordance with the provisions of the relevant Reinstatement Plan, carries out the Reinstatement Work in respect of which the Insurance Proceeds have been paid to the Province, then:
 - (i) if the Design-Builder submits to the Province's Representative pursuant to the Review Procedure:
 - (A) a certificate from the Design-Builder addressed to the Province confirming in writing the amount of the Property Damage Insurance Proceeds claimed by the Design-Builder, based on the value of the Reinstatement Work carried out by the Design-Builder;
 - (B) such supporting documentation and detail as may be required by the Province with respect to the Reinstatement Work that is the subject of the invoice and the cost thereof (which may include a Mark-up for overhead and profit in accordance with Section 2.4 [Valuation of Change in Costs] of Schedule 11) including documents and information to establish and verify the applicable matters to be considered in

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accordance with Section 2.6 of Schedule 2 [Representatives, Review Procedure and Consent Procedure] in respect of the Reinstatement Work and the Property Damage Insurance Proceeds;

- (C) standard Ministry evidence (or other evidence satisfactory to the Province) that the provisions of Section 5.10 [Compliance with *Builders Lien Act* and Payments to Contractors] of Schedule 8 and Section 6.12 [Workers' Compensation Coverage] have been complied with in respect of the Reinstatement Work and that there are no outstanding builders' liens or claims therefor in respect of such Reinstatement Work; and
- (D) written confirmation from the Design-Builder addressed to the Province that the amount of the certificate is justly due and payable in accordance with this Agreement and that the Design-Builder requires such certificate to be discharged out of the Property Damage Insurance Proceeds,

then the Province shall, within five Business Days after the date on which there has been (or deemed to have been) no objection by the Province under the Review Procedure to the submittal referred to in Section 6.18(d)(i)(A) to (D) inclusive, pay to the Design-Builder, out of the Property Damage Insurance Proceeds paid to the Province on account of the damage or destruction to which the Reinstatement Work relates, an amount equal to the lesser of the amount of such Property Damage Insurance Proceeds paid to the Province and the amount claimed in such certificate; and

- (ii) upon the issuance of a Certificate of Total Completion in respect of the Reinstatement Work pursuant to the Design and Certification Procedure, if the Design-Builder submits to the Province's Representative pursuant to the Review Procedure:
 - (A) a copy of the Certificate of Total Completion in respect of such Reinstatement Work;
 - (B) an invoice for payment to the Design-Builder of the balance (if any) of any such Property Damage Insurance Proceeds; and
 - (C) standard Ministry evidence (or other evidence satisfactory to the Province) that the provisions of Section 5.10 [Compliance with *Builders Lien Act* and Payments to Contractors] of Schedule 8 and Section 6.12 [Workers' Compensation Coverage] have been complied with in respect of the Reinstatement Work and that there are no outstanding builders' liens or claims therefor in respect of such Reinstatement Work,

the Province shall, subject to any specific requirements of the insurers, within five Business Days after the date on which there has been (or deemed to have been) no objection by the Province under the Review Procedure to the submittal referred to in Sections 6.18(d)(ii)(A) to (C) inclusive, pay to the Design-Builder the balance (if any) of the Property Damage Insurance Proceeds paid to the

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Province on account of the damage or destruction to which the Reinstatement Work relates; and

- (e) in the case of any insurance other than that referred to in Sections 6.18(a) and (b), proceeds shall be paid so as to ensure the performance by the Design-Builder of its obligations under this Agreement. Proceeds of delay in start up insurance and business interruption insurance may be used to pay the Design-Builder's debt service and other costs incurred by the Design-Builder covered by such insurance and if so paid shall be deemed to have been paid to ensure the performance by the Design-Builder of its obligations under this Agreement.

6.19 Repayment of Insurance Proceeds

The Design-Builder hereby undertakes that if, following payment to the Design-Builder or to a third party at the request of or on behalf of the Design-Builder as contemplated by Sections 6.18(c) and (d), the Province receives a *prima facie* valid demand from the relevant insurer for all or any part of the Property Damage Insurance Proceeds, the Design-Builder shall, if and to the extent that such demand arises or results (directly or indirectly) from any Design-Builder Non-Excusable Event, pay to the insurer the amount demanded within the time period stated in the demand.

6.20 Proceeds of Property Insurance if Agreement Terminated

If this Agreement is terminated, all proceeds of any property insurance that is required as part of the Required Insurance (excluding the insurance required by Section 1.4(b) of Schedule 15 [Insurance Requirements]), to the extent such proceeds have not been used to pay the cost of, or are not owed in respect of, Reinstatement Work in respect of the loss or damage in respect of which such proceeds were payable, shall be paid to and retained by the Province as its sole property, and for such purposes the Province and the Design-Builder shall sign all such documents and do all such things as may be reasonably required for such proceeds to be paid to the Province by insurers.

6.21 Alternate Risk Financing Measures

From time to time during the Term, the Province may, but will not be obliged to, pursue and implement, subject to and in accordance with the provisions of Part 7 [Province Changes and Design-Builder Proposals] and Schedule 11 [Changes], alternate risk financing measures for the Project if the Province considers in its discretion that such alternate measures would result in coverage substantially similar to the insurance coverages described in Schedule 15 [Insurance Requirements] being obtained in a more cost efficient manner.

PART 7 PROVINCE CHANGES AND DESIGN-BUILDER PROPOSALS

7.1 Province Changes

The Province may, at any time during the Term, require Province Changes (including Minor Works under Section 7.3(a)) subject to and in accordance with the provisions of this Part 7 and Schedule 11 [Changes], and the Design-Builder shall be entitled to apply for relief from its obligations or claim compensation under this Agreement, or both, to the extent, if any, provided in this Part 7 and such Schedule.

7.2 Design-Builder Proposals

The Design-Builder may, at any time during the Term:

- (a) submit the Design-Builder Proposals (either as Minor Works under Section 7.3(b) or as Value Engineering Proposals under Section 7.4 [Value Engineering Proposals]) for consideration by the Province subject to and in accordance with the provisions of this Part 7 and Schedule 11 [Changes], provided that the Province shall not be required to consider any Design-Builder Proposal unless and until the Design-Builder provides to the Province's Representative sufficient information to enable the Province to adequately consider and evaluate such Design-Builder Proposal; and
- (b) request that the Province consider, in its discretion, initiating as a Province Change any other matter, provided that, if the Design-Builder becomes aware that any element of the Project Requirements does not comply with and satisfy the specific requirements of any of paragraphs (a), (b), (c), (e) or (f) of Section 4.1 [Design-Builder to Carry Out Project Work], the Design-Builder shall so notify the Province's Representative prior to complying with such specific requirements and shall, in the case of any such discrepancy arising after the Effective Date, request that the Province initiate as a Province Change an amendment to the Project Requirements so that they comply with and satisfy such specific requirements.

7.3 Minor Works

If at any time during the Term:

- (a) the Province initiates a Province Change that:
 - (i) does not require any material amendment to this Agreement (other than any specific amendment of the Project Requirements to which such Province Change relates); or
 - (ii) will not negatively affect any date set out in the Project Schedule; and
 - (iii) sets out in the proposal a Minor Works Valuation that, when added to the aggregate of all of the Minor Works Valuations for all of the other prior Minor Works initiated by the Province, cannot reasonably be expected to exceed \$10,000,000; or
- (b) the Design-Builder establishes to the satisfaction of the Province, acting reasonably, that a Design-Builder Proposal initiated by the Design-Builder under Section 7.2(a):
 - (i) does not require any material amendment to this Agreement (other than any specific amendment of the Project Requirements to which such Design-Builder Proposal relates); and
 - (ii) has a Minor Works Valuation of less than or equal to zero,

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then such Province Change or the Design-Builder Proposal, as the case may be, shall be considered “**Minor Works**” and shall be prepared and evaluated in accordance with the provisions of Part 1 [Minor Works] of Schedule 11.

7.4 Value Engineering Proposals

The Design-Builder may initiate the Design-Builder Proposals as “**Value Engineering Proposals**” to be prepared and evaluated in accordance with Part 3 [Value Engineering Proposals] of Schedule 11.

7.5 Responsibility for Province Changes and Design-Builder Proposals

The Design-Builder shall not be entitled to any payment, compensation, extension of time or other relief for a Province Change or the Design-Builder Proposal except (in the case of Minor Works) in accordance with Section 1.2(c) of Schedule 11 [Changes] or (in the case of other Province Changes) to the extent provided in a Change Certificate issued in accordance with Schedule 11 [Changes].

7.6 Payments in Respect of Province Changes and Design-Builder Proposals

Any payments between the Province and the Design-Builder and any adjustments to the payments to be made under this Agreement in respect of Province Changes or the Design-Builder Proposals shall be made in accordance with Part 10 [Payments].

PART 8 SUPERVENING EVENTS

8.1 Supervening Events

- (a) If, in the case of:
 - (i) the Design-Builder, a Compensation Event or Relief Event occurs; or
 - (ii) either the Province or the Design-Builder, a Force Majeure Event occurs,

then if and to the extent that such event interferes adversely with, or causes a failure of, or prevents, the performance of, in the case of the Design-Builder, the Project Work or, in the case of the Province, any obligation under this Agreement, then, subject to Section 8.1(b), the affected or entitled party (the “**Applicant**”) may apply for relief from its obligations, apply for extensions of time, claim compensation and/or claim a termination right under this Agreement to the extent provided in this Part 8.

- (b) Notwithstanding any other provision of this Part 8, an Applicant shall only be entitled to relief from its obligations, extensions of time, compensation and/or a termination right under this Agreement in accordance with this Part 8 in respect of a Supervening Event:
 - (i) in the case of a claim of any Supervening Event by the Design-Builder other than a No Threshold Compensation Event, if the interference with, failure of or prevention of the Project Work referred to in Section 8.1(a) arising from such Supervening Event is in respect of either or both the Design and the Construction, and such Supervening Event is either:

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- (A) one of the first four Supervening Events claimed by the Design-Builder and determined in accordance with this Part 8 to have occurred in any Contract Year from the Effective Date until the Substantial Completion Date (or portion of such Contract Year in the case of the first and last Contract Years which commence during such period), each of which has resulted in either or both of the following:
 - (1) a Change in Costs in respect of the Design or the Construction of greater than \$100,000; or
 - (2) a delay of three or more days to the occurrence of either or both of the Substantial Completion Date or the Total Completion Date; or
- (B) claimed by the Design-Builder in a Contract Year (or portion thereof in the case of the first and last Contract Years commencing in the period referred to in Section 8.1(b)(i)(A)) after four other Supervening Events meeting the requirements of this Part 8, including Section 8.1(b)(i)(A), have occurred;
- (ii) if and to the extent that such Supervening Event is not caused by, could not reasonably have been prevented by and is beyond the reasonable control of the Applicant or any person for whom the Applicant is in law responsible;
- (iii) in the case of any claim of a Supervening Event by the Design-Builder, if and to the extent that such Supervening Event and/or the effect thereof is not required by the Project Requirements to be contemplated or taken into account in the Design of the Project Infrastructure;
- (iv) if and to the extent that such Supervening Event and/or the effect thereof does not result from or is not contributed to by, directly or indirectly:
 - (A) in the case of a claim of any Supervening Event by the Design-Builder, any Design-Builder Non-Excusable Event; or
 - (B) in the case of a claim of a Force Majeure Event by the Province, any Province Non-Excusable Event; and
- (v) if the Applicant provides a Supervening Event Notice in respect of such Supervening Event pursuant to Section 8.2(a) no more than 12 months after the date of the occurrence or commencement of such Supervening Event.
- (c) Nothing in this Part 8 shall limit the Province's right to request a Province Change pursuant to Section 7.1 [Province Changes] in response to the occurrence of any Supervening Event, including a Province Change to give to the Design-Builder instructions to accelerate construction or take other steps to avoid any delay or impediment, or reduce the period of any future delay or mitigate the effect of any future impediment, resulting from such Supervening Event. Subject to a cancellation of such request for a Province Change as a result of the successful exercise by the Design-Builder of its rights in accordance with Section 4.2 [Design-Builder Objection] of

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Schedule 11, in the event that the Province requests such a Province Change the procedures in respect of such Supervening Event set out in this Part 8 shall terminate and the matter shall be fully determined in accordance with Part 7 [Province Changes and the Design-Builder Proposals] and Schedule 11 [Changes], provided that the Supervening Event and its consequences (as such consequences may be affected by the Province Change) shall be dealt with as part of the resulting Province Change.

8.2 Procedures Upon Occurrence of a Supervening Event

The following procedures shall apply if a Supervening Event occurs:

- (a) as soon as practicable, and in any event within five Business Days after the Applicant has knowledge that the Supervening Event has caused, or is reasonably likely to cause, an entitlement under this Part 8, the Applicant shall give to the Province, where the Applicant is the Design-Builder, or the Design-Builder, where the Applicant is the Province, a notice (“**Supervening Event Notice**”) identifying the particular Supervening Event and summarizing, to the extent the Applicant has knowledge thereof, the consequences and the nature of the Applicant’s claim;
- (b) following the delivery of a Supervening Event Notice, as soon as practicable, and in any event within 30 Business Days after the delivery of the Supervening Event Notice, the Applicant shall give to the Province, where the Applicant is the Design-Builder, or the Design-Builder, where the Applicant is the Province,:
 - (i) any additional details or information, including available supporting documentation, in support of its claim in respect of the occurrence of the Supervening Event; and
 - (ii) if applicable, a detailed breakdown of all estimated Direct Losses that have been, will be or are reasonably likely to be incurred by the Applicant as a result of the Supervening Event; and
 - (iii) all other relevant information which would be required to be included in a Change Report under Section 2.3 [Preparation of Change Report] of Schedule 11 if such Supervening Event was a Province Change;
- (c) if a Supervening Event for which a Supervening Event Notice has been delivered ceases, the Applicant shall give to the Province, where the Applicant is the Design-Builder, or the Design-Builder, where the Applicant is the Province, as soon as practicable notice thereof and of when performance of its affected obligations can be resumed;
- (d) a party may not make multiple or duplicative claims in respect of any Supervening Event, and the relief, extensions of time, compensation and/or termination right in respect of a Supervening Event as is agreed to by the parties or otherwise determined in accordance with the Dispute Resolution Procedure pursuant to Section 8.2(h)(ii) shall be the only relief, extensions of time, compensation and/or termination right to which the Applicant shall be entitled in respect of such Supervening Event;
- (e) the other party shall provide the Applicant any information reasonably requested by the Applicant in order for the Applicant to make its claim;

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- (f) where the claim in respect of a Supervening Event includes Claims to which Section 9.9 [Conduct of Claims Indemnified by the Province] applies, such Claims shall be subject to the provisions of Section 9.9 [Conduct of Claims Indemnified by the Province] and otherwise the claim in respect of such Supervening Event shall be subject to the provisions of this Part 8;
- (g) the Applicant shall demonstrate to the reasonable satisfaction of the Province, where the Applicant is the Design-Builder, or the Design-Builder, where the Applicant is the Province, that:
 - (i) the applicable criteria required under Section 8.1(b) have been met;
 - (ii) the Supervening Event has caused or will cause the Applicant to suffer the effects from which or for which the Applicant seeks relief, extensions of time, compensation and/or a termination right under this Part 8; and
 - (iii) it has complied with its mitigation obligations under Section 3.1 [Mitigation By Province] or Section 4.10 [Mitigation By Design-Builder], as applicable; and
- (h) following the delivery of a Supervening Event Notice under Section 8.2(a), the Province and the Design-Builder shall consult and seek to agree to the effect of the relevant Supervening Event, provided that either of them may submit for resolution in accordance with the Dispute Resolution Procedure the question of:
 - (i) whether such Supervening Event has occurred, if within 10 Business Days following the delivery of the Supervening Event Notice the Province and the Design-Builder have not agreed to the occurrence of such Supervening Event; and/or
 - (ii) the extent of relief, extensions of time and/or compensation to which the Applicant is entitled, if within 20 Business Days following the exchange of all relevant information required under this Section 8.2, the Province and the Design-Builder have not agreed to the extent of such relief, extensions of time and/or compensation.

8.3 Design-Builder's Entitlements Upon Occurrence of a Compensation Event

Subject to Sections 8.1(b) and 8.12 [Delay in Notification] and to the Design-Builder's obligations under Section 4.10 [Mitigation By Design-Builder], if at any time a Compensation Event occurs:

- (a) to the extent that, and for so long as, the performance of any obligation under this Agreement by the Design-Builder is negatively affected by the Compensation Event (other than those obligations arising as a result of the Compensation Event, including the Design-Builder's obligations under Section 6.15 [Restoration and Reinstatement of Damage or Destruction]), the Design-Builder shall be relieved from any liability or consequence under this Agreement (including termination by the Province other than as expressly provided for in Section 8.7 [Termination for Damage or Destruction] and without limiting the Province's right to terminate this Agreement pursuant to Section

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14.1 [Termination for Convenience]) arising from its affected performance, including that:

- (i) no NCE Points or Default Points shall be assigned in respect of any such affected performance; and
 - (ii) no Non-Compliance Event Payments shall be applied in respect of any such affected performance;
- (b) subject to Section 8.7 [Termination for Damage or Destruction], Section 8.9 [Allocation of Risks of Participants and Trespassers] and Section 8.11 [Effect of Insurance], and save to the extent that the Design-Builder is entitled to be indemnified therefor pursuant to Section 9.6 [Limited Province Indemnity for Contamination] in respect of a Compensation Event falling within paragraph (m) of the definition thereof in Section 1.1 [Definitions] of Schedule 1, the Design-Builder shall be compensated through a lump sum payment from the Province for the amount of any Direct Losses incurred, or to be incurred, by the Design-Builder from the occurrence of the Compensation Event, provided that:
- (i) in the case of a Compensation Event referred to in paragraph (o) of the definition of Compensation Event in Section 1.1 [Definitions] of Schedule 1, such amount shall not include the first \$250,000 of the aggregate amount of the Direct Losses incurred by the Design-Builder to mitigate the effects of all Protest Actions during the Term;
 - (ii) in the case of a Compensation Event (or a Force Majeure Event in the circumstances set out in Section 8.6(a)(i)) that causes damage to or destruction of all or any part of the Project Infrastructure or the Project Site, the Province shall make payment of the portion of the amount that is payable for the Reinstatement Work in respect of such damage or destruction based on the same criteria and subject to satisfaction of all the same conditions as are set out in Sections 6.18(c) and (d) for the disbursement of Property Damage Insurance Proceeds under Section 6.18(b);
- (c) subject to Section 8.9 [Allocation of Risks of Participants and Trespassers], if it has been agreed or determined that the Compensation Event has resulted or will result in a delay to the occurrence of the Substantial Completion Date and/or the Total Completion Date, then if the Compensation Event occurs:
- (i) prior to the Substantial Completion Date, then the Substantial Completion Target Date shall be postponed; or
 - (ii) after the Substantial Completion Date but prior to the Total Completion Target Date, then the Total Completion Target Date shall be postponed,

in each case by or for, as the case may be, such time as is reasonable in the circumstances to take account solely of the effect of the delay caused, or that will be caused, by the Compensation Event to the achievement of the relevant date or dates, and in each case the Project Schedule shall be amended accordingly to reflect such

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postponement, including any resulting postponement of other related milestone dates set out therein.

8.4 Design-Builder's Entitlements Upon Occurrence of a Relief Event

Subject to Sections 8.1(b) and 8.12 [Delay in Notification] and to the Design-Builder's obligations under Section 4.10 [Mitigation By Design-Builder], if a Relief Event occurs:

- (a) to the extent that, and for so long as, the performance of any obligation under this Agreement by the Design-Builder is negatively affected by the Relief Event (other than those obligations arising as a result of the Relief Event, including the Design-Builder's obligations under Section 6.15 [Restoration and Reinstatement of Damage or Destruction]):
 - (i) without limiting the Province's right to terminate this Agreement pursuant to Section 14.1 [Termination for Convenience], the Province shall not exercise any right it would otherwise have under this Agreement to terminate this Agreement arising from the Design-Builder's inability to perform such obligation (other than as expressly provided for in this Section 8.4 or Section 8.7 [Termination for Damage or Destruction]); and
 - (ii) no NCE Points or Default Points shall be assigned in respect of any such affected performance; and
- (b) if it has been agreed or determined that the Relief Event has resulted or will result in a delay to the occurrence of the Substantial Completion Date and/or the Total Completion Date, then if the Relief Event occurs:
 - (i) prior to the Substantial Completion Date, then the Substantial Completion Target Date shall be postponed; or
 - (ii) after the Substantial Completion Date but prior to the Total Completion Target Date, then the Total Completion Target Date shall be postponed,

in each case by or for, as the case may be, such time as is reasonable in the circumstances to take account solely of the effect of the delay caused, or that will be caused, by such Relief Event to the achievement of the relevant date or dates, and in each case the Project Schedule shall be amended accordingly to reflect such postponement, including any resulting postponement of other related milestone dates set out therein.

8.5 Parties' Entitlements Upon Occurrence of a Force Majeure Event

Subject to Sections 8.1(b) and 8.12 [Delay in Notification] and to the Applicant's obligations under Section 3.1 [Mitigation By Province] or Section 4.10 [Mitigation By Design-Builder], as applicable, if at any time a Force Majeure Event occurs:

- (a) to the extent that, and for so long as, the performance of any obligation under this Agreement by the Applicant is negatively affected by the Force Majeure (other than those obligations arising as a result of the Force Majeure Event, including the Design-

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Builder's obligations under Section 6.15 [Restoration and Reinstatement of Damage or Destruction]):

- (i) without limiting the Province's right to terminate this Agreement pursuant to Section 14.1 [Termination for Convenience], the Province shall not exercise any right that it would otherwise have under this Agreement to terminate this Agreement arising from the Applicant's inability to perform such obligation (other than as expressly provided for in Section 8.6 [Termination for Force Majeure Event] or Section 8.7 [Termination for Damage or Destruction]); and
 - (ii) if the Applicant is the Design-Builder, no NCE Points or Default Points shall be assigned in respect of any such affected performance; and
- (b) if it has been agreed or determined that the Force Majeure Event has resulted or will result in a delay to the occurrence of the Substantial Completion Date and/or the Total Completion Date, then if the Force Majeure Event occurs:
- (i) prior to the Substantial Completion Date, then the Substantial Completion Target Date shall be postponed; or
 - (ii) after the Substantial Completion Date but prior to the Total Completion Target Date, then the Total Completion Target Date shall be postponed,

in each case by or for, as the case may be, such time as is reasonable in the circumstances to take account solely of the effect of the delay caused, or that will be caused, by the Force Majeure Event to the achievement of the relevant date or dates, and in each case the Project Schedule shall be amended accordingly to reflect such postponement, including any resulting postponement of other related milestone dates set out therein.

8.6 Termination for Force Majeure Event

- (a) If the occurrence of a Force Majeure Event frustrates or renders impossible for a continuous period of more than 180 days the performance by the Province or the Design-Builder of its respective obligations with respect to all or a material portion of the Project or the Project Work, as the case may be, so as to frustrate the overall purpose and intent of the Project, then either the Province or the Design-Builder may at any time, provided that such frustration is then continuing, terminate this Agreement by notice to the other party having immediate effect, subject to Sections 8.1(b) and 14.4 [Notice of Intention to Terminate and Dispute], provided that, if the Design-Builder exercises such right to terminate, the Province may, by notice to the Design-Builder reject such termination of this Agreement by the Design-Builder and upon such rejection by the Province:
- (i) the parties, insofar as they are able to do so, will continue to perform their respective obligations under this Agreement in accordance with the provisions of this Agreement;
 - (ii) without prejudice to the other relief available to the parties in respect of such Force Majeure Event pursuant to Section 8.5 [Parties' Entitlements Upon

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Occurrence of a Force Majeure Event], the Design-Builder shall, for so long as the effects of the relevant Force Majeure Event continue, be compensated in accordance with Section 8.3(b), but only in respect of the Direct Losses incurred by the Design-Builder as a result of the Force Majeure Event as and from the date of the exercise by the Design-Builder of its termination right; and

- (iii) the Province may at any time thereafter, provided that such frustration is then continuing, terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute].
- (b) If this Agreement is terminated by either the Province or the Design-Builder pursuant to Section 8.6(a), compensation on termination shall be payable in accordance with Part 1 [Compensation on Termination other than for Design-Builder Default] of Schedule 13.

8.7 Termination for Damage or Destruction

If all or any substantial part of the Project Infrastructure or the Project Site is damaged or destroyed as a result of the occurrence of:

- (a) any event (other than a Compensation Event referred to in paragraph (q) or paragraph (r) of the definition of Compensation Event in Section 1.1 [Definitions] of Schedule 1) and:
 - (i) the information provided by the Design-Builder and consented to by the Province as part of the Reinstatement Plan pursuant to Section 6.16 [Reinstatement Plan], or as otherwise provided by the Design-Builder to the satisfaction of the Province if there is no Reinstatement Plan required under Section 6.16, establishes that there are insufficient funds available to the Design-Builder from all sources to allow the Design-Builder to complete the Reinstatement Work (the deficiency being called the “**Reinstatement Funds Deficiency**”); and
 - (ii) no party has agreed to fund the Reinstatement Funds Deficiency,
- then:
- (iii) in the event that it is agreed or established that either:
 - (A) such damage or destruction of all or a substantial part of the Project Infrastructure or Project Site results from or is contributed to by a Design-Builder Non-Excusable Event, including as a result of a failure by the Design-Builder to comply with and implement all design requirements specified in the Project Requirements applicable to the damaged Project Infrastructure or Project Site; or
 - (B) the cause of the Reinstatement Funds Deficiency is a breach by the Design-Builder of any of its obligations with respect to the Required Insurance set out in Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements], including a failure by the

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Design-Builder to fund any deductibles and/or waiting periods for which it is responsible under this Agreement,

the Province may terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute], in which event compensation on termination shall be payable in accordance with Part 2 [Compensation on Termination for the Design-Builder Default] of Schedule 13; or

- (iv) in any case where Section 8.7(a)(iii) does not apply, either the Province or the Design-Builder may terminate this Agreement by notice to the Province having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute], in which event compensation on termination shall be payable in accordance with Part 1 [Compensation on Termination other than for Design-Builder Default] of Schedule 13; or
- (b) a Compensation Event referred to in paragraph (q) or paragraph (r) of the definition of Compensation Event in Section 1.1 [Definitions] of Schedule 1, the Province shall elect, by notice to the Design-Builder having immediate effect, either:
 - (i) to compensate the Design-Builder in accordance with Section 8.3(b), and this Agreement will continue; or
 - (ii) subject to Section 14.4 [Notice of Intention to Terminate and Dispute], to terminate this Agreement, in which event compensation on termination shall be payable in accordance with Part 1 [Compensation on Termination other than for Design-Builder Default] of Schedule 13,

provided that the Province may not in such case elect to terminate this Agreement pursuant to Section 8.7(b)(ii) if the Design-Builder releases the Province from all obligations under Section 8.7(b)(i) and deposits with the Province an amount equal to the estimated amount to complete the Reinstatement Work as set out in the Reinstatement Plan pursuant to Section 6.16 [Reinstatement Plan]. Such amount shall be held and disbursed based on the same criteria as are provided in Sections 6.18(c) and (d) for the disbursement of Property Damage Insurance Proceeds under Section 6.18 [Application of Proceeds of Insurance] (subject to satisfaction of all conditions to such disbursement provided for in that Section).

8.8 Responsibility for Participants and Trespassers

- (a) Except as otherwise expressly provided in this Agreement, neither the Province nor BCTFA shall be responsible for the presence on or around or entry onto or around the Project Site or the Project Infrastructure, or any other interference with or affecting the Project Site or the Project Infrastructure or the vicinity of them or the Project Work by or caused by, any participants (“**Participants**”) in a Labour Dispute or a Protest Action, or any persons other than Participants not entitled to be on the Project Site or the Project Infrastructure (“**Trespassers**”), nor for any act, omission or default of any Participant or Trespasser (in any such case whether before or during the Term). The presence on or around or entry onto or around the Project Site or the Project Infrastructure of, or any

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other interference with or affecting the Project Site or the Project Infrastructure or the vicinity of them or the Project Work by or caused by, any Participant or Trespasser and any lawful or unlawful activities of any such person shall not be a breach of the obligation of the Province hereunder to permit the Design-Builder to have access to the Project Site, nor a breach of any other obligation or representation or warranty of the Province under this Agreement.

- (b) The management of Participants and Trespassers in respect of the Project Site and the Project Infrastructure shall be the responsibility of the Design-Builder. If at any time any part of the Project Site or the Project Infrastructure is occupied by any Participants or Trespassers, then as soon as reasonably practicable the Design-Builder shall notify the Province of such occurrence and of the action which the Design-Builder proposes to take to deal with such Participants or Trespassers. The Design-Builder may exercise any legal remedies available to it to remove Participants and/or Trespassers (including the obtaining of injunctions and enforcement orders in respect thereof), provided that the Design-Builder shall give the Province's Representative reasonable (and in any event not less than 24 hours') notice prior to commencing any legal proceedings for that purpose and provided further that the Design-Builder shall not give directly or indirectly to any Participant or Trespasser any inducement, monetary or otherwise, with a view to avoiding, limiting or influencing the manner of protest activities by that Participant or Trespasser or by other Participants or Trespassers, provided that the Design-Builder shall not by virtue of this Section 8.8 be prevented from entering into bona fide settlements of Claims brought against it by Participants or Trespassers which provide for reasonable payments in satisfaction of such Claims or agreeing to any reasonable cost orders in any proceedings.
- (c) the Design-Builder may request the assistance of the Province (at the cost of the Design-Builder) to remove Participants where the Design-Builder demonstrates to the Province's reasonable satisfaction that it has exercised all legal remedies available to it to remove the Participants (provided that for this purpose the Design-Builder may but shall not be obligated to prosecute injunctive or other judicial remedies beyond the Court of first instance) and that the continued presence of the Participants is having a material adverse effect on the conduct of the Project Work that the Design-Builder is unable to mitigate. Following such request, the Province shall notify the Design-Builder whether the Province can lawfully provide any assistance in relation to the removal of the Participants that is not independently available to the Design-Builder and, to the extent that such assistance can be lawfully provided, the Province shall provide such assistance (at the Design-Builder's cost) to the extent it is, in the discretion of the Province, reasonable and appropriate in the circumstances to do so.
- (d) Where the Design-Builder is given assistance by the Province in accordance with Section 8.8(c), the Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in respect of all Direct Losses and/or Claims suffered or incurred by the Province and the Province Indemnified Persons, or any of them, as a result of or in connection with the provision of such assistance.

8.9 Allocation of Risks of Participants and Trespassers

(a) In the event of any Protest Action, the Design-Builder shall be entitled to compensation, extensions of time and other relief in respect thereof as a Compensation Event in accordance with this Part 8 and the following additional parameters:

(i) the Design-Builder shall only be entitled to extensions of time in respect of Protest Actions pursuant to Section 8.3(c) if and to the extent that the Design-Builder establishes that the Participants in such Protest Action continue to occupy any part of the Project Site or the Project Infrastructure for a period of more than seven days after the Design-Builder has exhausted all legal remedies available to it to seek injunctive relief or other interim judicial remedies from a Court of first instance to remove them and to enforce any injunction or other interim remedy granted by such Court to remove them (provided that for this purpose the Design-Builder may but shall not be obligated to prosecute injunctive or other interim judicial remedies beyond the Court of first instance); and

(ii) the Design-Builder shall only be entitled to compensation in respect of Protest Actions pursuant to Section 8.3(b) if and, subject to Section 8.11 [Effect of Insurance], to the extent that the Design-Builder establishes that it has incurred during the Term Direct Losses to mitigate the effects of Protest Actions, including:

(A) the costs of exercising any legal remedy available to the Design-Builder in respect of Protest Actions (including in accordance with its obligations under Section 8.8 [Responsibility for Participants and Trespassers]);

(B) the increased costs, including financing costs, attributable to any extension of time to which the Design-Builder is entitled;

(C) the cost of remedying any damage caused by Protest Actions; and

(D) the taking of any mitigation action in relation to Protest Actions,

which aggregate (including amounts paid by way of indemnity under Section 8.8(d) but excluding amounts referred to in Section 8.11 [Effect of Insurance]) more than _____,

provided that the limitations on the compensation and extensions of time available to the Design-Builder from that otherwise available to the Design-Builder in the event of a Compensation Event, as set out in Sections 8.9(a)(i) and 8.9(a)(ii), shall not apply to the extent that such Protest Action arose, directly or indirectly, as a result of any Province Non-Excusable Event.

(b) Except as expressly provided in Section 8.9(a), and subject to Sections 8.4 and 8.5, as between the Province and the Design-Builder the Design-Builder shall bear, without recourse to the Province:

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- (i) any Losses suffered by the Design-Builder, its agents or Subcontractors or employees of any of them;
- (ii) any Direct Losses suffered by the Province or any of the Province Indemnified Persons arising:
 - (A) from any interference, obstruction, or other hindrance to the Project or to the conduct of the Project Work, including the presence of any Participant or Trespasser on the Project Site or the Project Infrastructure;
 - (B) from any damage caused to the Project Infrastructure;
 - (C) as a result of any measures taken by or on behalf of or at the request or direction of the Design-Builder; and/or
 - (D) as a result of the failure by the Design-Builder to take or cause to be taken measures which should have been taken,

that are caused by any Participant or Trespasser, including any damage to property, any bodily injury or death, and any loss of income.

- (c) Nothing in this Section 8.9 shall affect:
 - (i) any right of the Province or BCTFA to make or recover any Claim against any Participant or Trespasser for public nuisance or for damage suffered by the Province or BCTFA or their respective agents, contractors or subcontractors of any tier or any employees of any of them; or
 - (ii) any right of the Design-Builder to make or recover any Claim against any Participant or Trespasser for damage suffered by the Design-Builder, its agents or Subcontractors or any employees of any of them.

8.10 Sharing of Increased Recoverable Expenditures in Specified Circumstances

- (a) In the event that the discovery of any Undisclosed Utilities causes the Design-Builder to incur additional Recoverable Expenditures in order to carry out the Project Work and otherwise comply with the Project Requirements as a result of the existence or actual location of such Utilities which the Design-Builder would not have incurred but for such discovery, then the Design-Builder shall be entitled, subject to the Design-Builder's obligations under Section 4.10 [Mitigation By Design-Builder] and except to the extent that any such Recoverable Expenditures result from or are contributed to, directly or indirectly, by any Design-Builder Non-Excusable Event, to receive compensation through a lump sum payment from the Province in respect of such additional aggregate Recoverable Expenditures incurred by the Design-Builder as a direct consequence of the discovery of all such Undisclosed Utilities during the Term (the "**Additional Utilities Recoverable Expenditures**") in an amount calculated in accordance with Table 8.10(a) set forth below.

Table 8.10(a) Sharing of Additional Utilities Recoverable Expenditures

Additional Utilities Recoverable Expenditure	Province Share of Additional Utilities Recoverable Expenditure	Design-Builder Share of Additional Utilities Recoverable Expenditure	Maximum Cumulative Design-Builder Share of Additional Utilities Recoverable Expenditure during Term
Applicable to first			
Applicable to next incremental			
Applicable to amount over			

- (b) In the event that the existence of any Non-Foreseeable Contamination causes the Design-Builder to incur additional Recoverable Expenditures in order to carry out the Project Work and otherwise comply with the Project Requirements in accordance with this Agreement which the Design-Builder would not have incurred but for such existence, then the Design-Builder shall be entitled, subject to the Design-Builder’s obligations under Section 4.10 [Mitigation By Design-Builder] and except to the extent that any such Recoverable Expenditures result from or are contributed to, directly or indirectly, by any Design-Builder Non-Excusable Event, to receive compensation through a lump sum payment from the Province in respect of such additional aggregate Recoverable Expenditures incurred by the Design-Builder as a direct consequence of the existence of all such Non-Foreseeable Contamination during the Term (the “**Additional Contamination Recoverable Expenditures**”) in an amount calculated in accordance with Table 8.10(b) set forth below.

Table 8.10(b) Sharing of Additional Contamination Recoverable Expenditures

Additional Contamination Recoverable Expenditure	Province Share of Additional Contamination Recoverable Expenditure	Design-Builder Share of Additional Contamination Recoverable Expenditure	Maximum Cumulative Design-Builder Share of Additional Contamination Recoverable Expenditure during Term
Applicable to first			
Applicable to next incremental			
Applicable to amount over			

8.11 Effect of Insurance

Notwithstanding anything to the contrary in this Part 8, the Design-Builder shall not be entitled to any compensation under this Part 8 in respect of any Supervening Event to the extent, in respect of the Supervening Event:

- (a) that:
 - (i) the Design-Builder recovers or is entitled to recover under any Required Insurance, or would have been entitled to recover under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement; or
 - (ii) the Supervening Event or any aspect thereof is insured against, or required to be insured against, under any Required Insurance, or would have been insured against under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement,

whether or not such Required Insurance was in fact effected or, if effected, was vitiated, and whether vitiated as a result of any act or omission of the Design-Builder (or any person for whom the Design-Builder is in law responsible) (including, but not limited to, by reason of non-disclosure or under-insurance or failure or insolvency of the insurer), or for any other reason (excluding only vitiation caused by any act or omission of the Province or any person for whom the Province is in law responsible, but only to the extent non-vitiation terms protecting against vitiation in the case of such act or omission are not required by the terms of this Agreement to be included in the applicable insurance policies);

- (b) that the Design-Builder recovers or is entitled to recover under any policy of insurance that is not Required Insurance but that the Design-Builder has in fact taken out and maintained;
- (c) that there are proceeds of insurance held by the Province that are (subject to the Design-Builder fulfilling all conditions to the disbursement thereof) available for satisfaction of the Claims or Direct Losses arising as a result of such Supervening Event, in whole or in part;
- (d) that the Province makes or authorizes, or is obligated under this Agreement (subject to the Design-Builder fulfilling all conditions thereto) to make or authorize, payment to or for the account of or on behalf of the Design-Builder under Section 6.18 [Application of Proceeds of Insurance]; or
- (e) of any amounts in respect of deductibles and waiting periods under any insurance referred to in either of Sections 8.11(a) and (b) for which the Design-Builder is responsible;

provided that, in the case of a Compensation Event described in paragraph (o) of the definition of Compensation Event in Section 1.1 [Definitions] of Schedule 1, the Province shall not reduce pursuant to this Section 8.11 the compensation it would otherwise have paid under this Part 8 by reason of proceeds of insurance that the Design-Builder recovers or is entitled to recover up to, in the case of all

Compensation Events described in paragraph (o) of the definition of Compensation Event, an aggregate limit over the Term of \$250,000.

8.12 Delay in Notification

- (a) If a Supervening Event Notice is provided by an Applicant to the other party more than 12 months after the date of the occurrence or commencement of such Supervening Event contrary to Section 8.1(b)(v), then the Applicant shall not be entitled to any compensation, extension of time or relief from its obligations under this Agreement in respect of the Supervening Event that was the subject of such Supervening Event Notice.
- (b) If a Supervening Event Notice or any required information is provided by an Applicant to the other party after the relevant dates referred to in Section 8.2 [Procedures Upon Occurrence of a Supervening Event], then the Applicant shall not be entitled to any compensation, extension of time or relief from its obligations under this Agreement in respect of the Supervening Event that was the subject of such Supervening Event Notice to the extent that the amount thereof would (but for this Section 8.12(b)) have increased as a result of such delay in providing such notice or information.

PART 9 INDEMNITIES AND LIMITATIONS ON LIABILITY

9.1 Indemnification by Design-Builder

Without limiting the Design-Builder's duties, obligations and liabilities under Section 2.3 [Assumption of Risk and Responsibility], and subject to Section 9.2 [Exceptions to Indemnification by Design-Builder], the Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, from and against any and all Claims and Direct Losses at any time suffered or incurred by, or brought or made against, the Province and the Province Indemnified Persons, or any of them, that arise directly or indirectly out of, in the course of, in connection with or as a result of the Project Work, or any use or occupation of or event, loss or occurrence on or to the Project Site or the Project Infrastructure during the Term, or any obligation of the Design-Builder under this Agreement, including, in respect of any of the foregoing, Claims and Direct Losses:

- (a) for or in respect of:
 - (i) bodily injury including death resulting at any time therefrom; or
 - (ii) any damage to or loss of property, whether real or personal, including damage to or loss of:
 - (A) all or any part of the Project Infrastructure or any other property belonging to the Province or BCTFA or for which either of them is responsible;
 - (B) Infrastructure or property of any Governmental Authority or other Relevant Authority, including the Municipality, or of any Utility Supplier, Railway or other third party;

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- (C) lands (and improvements thereon) forming part of or adjacent to the Project Site; or
 - (D) Plant or Construction Plant;
- (b) suffered by the Design-Builder or any person for whom the Design-Builder is in law responsible or any employees of any of them or any user of the Project Facilities or other third party, that arise out of or in the course of or in connection with or as a result of the Project Work or the use or occupation of the Project Site and the Project Infrastructure or any part thereof (including any Claims in respect of environmental mitigation measures);
 - (c) that are to be borne by the Design-Builder in accordance with Section 8.8 [Responsibility for Participants and Trespassers] or Section 8.9 [Allocation of Risks of Participants and Trespassers] or that arise out of or in connection with any measures taken or not taken by the Design-Builder, or by or on behalf of the Province or BCTFA at the request of the Design-Builder, against or in connection with Participants or Trespassers; or
 - (d) caused by, arising out of, relating to or resulting from or in connection with:
 - (i) any act or omission of any user of the Project Site or the Project Infrastructure or other person on or about the Project Site or the Project Infrastructure;
 - (ii) any adoption, reliance, use, interpretation or application by or on behalf of the Design-Builder, any Subcontractor, or any other person for whom the Design-Builder is in law responsible in relation to any Project Work, of any or all of or any part of the Design Data, Disclosed Data or other data or documents provided or made available by or on behalf of the Province or BCTFA, whether before or after execution of this Agreement, except as expressly provided in Section 2.15(d);
 - (iii) any act or omission of the Design-Builder or any person for whom the Design-Builder is in law responsible or employees of any of them that directly or indirectly causes any breach of any statutory or public powers, authorities, discretions, duties or obligations;
 - (iv) any Contamination, or any remediation, handling or legal requirement of a Governmental Authority in respect of Contamination;
 - (v) any infringement or misappropriation or alleged infringement or misappropriation of any other person's Intellectual Property Rights or breach or alleged breach of obligations of confidentiality by the Design-Builder or any person for whom the Design-Builder is in law responsible;
 - (vi) any breach in the observance or performance of any of the obligations of the Design-Builder under this Agreement or any of the other Project Documents;
 - (vii) any repair, correction or warranty obligations of the Design-Builder under this Agreement, including the obligation to correct Project Work Defects under Schedule 5 [Project Work Defects and Warranties];

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- (viii) anything done or omitted to be done by or on behalf of the Design-Builder, any Subcontractor, or any other person for whom the Design-Builder is in law responsible, or any of them, in connection with or pursuant to or under any of the Conditions of Access,
- (ix) any breach of Section 4.5 [Prohibited Acts] or anything done or omitted to be done by or on behalf of the Design-Builder, any Subcontractor or any other person in connection with any of Sections 12.3(b)(ii) to (iii) inclusive; or
- (x) any wrongful act, wrongful omission, negligence or wilful misconduct of the Design-Builder or persons for whom the Design-Builder is in law responsible in connection with the Project Work, or during the Term.

9.2 Exceptions to Indemnification by Design-Builder

The obligations of the Design-Builder to indemnify under Section 9.1 [Indemnification by Design-Builder] (and, to the extent this Section 9.2 (or any paragraph of this Section 9.2) is expressly made applicable thereto, under other indemnities under this Agreement) shall not apply to any Claims or Direct Losses to the extent that:

- (a) the Province is obligated to indemnify the Design-Builder in respect of Claims and Direct Losses arising out of the same events or circumstances pursuant to Section 9.5 [Indemnification by the Province] or Section 9.6 [Limited Province Indemnity for Contamination];
- (b) the Claims or Direct Losses are directly attributable to any wrongful act, wrongful omission or wilful misconduct by the Province or any person for whom the Province is in law responsible on or about the Project Site or the Project Infrastructure;
- (c) the Claims or Direct Losses are directly attributable to any breach in the observance or performance of any of the obligations of the Province or BCTFA under this Agreement or any other Province Project Document, by the Province, BCTFA or any person for whom the Province is in law responsible;
- (d) the Claims or Direct Losses:
 - (i) consist of payments that the Province has made or is obligated to make to the Design-Builder pursuant to Schedule 11 [Changes];
 - (ii) consist of compensation that the Province has paid or is obligated to pay to the Design-Builder pursuant to Section 8.3(b), Section 8.4(c) or Section 8.6(a)(ii) to the extent that the relevant Compensation Event, Relief Event or Force Majeure Event, as the case may be, does not arise or result (directly or indirectly) from any Design-Builder Non-Excusable Event; or
 - (iii) are directly attributable to a Province Change, Compensation Event or a Force Majeure Event (save that this exception shall not apply to the extent that the Design-Builder would otherwise be responsible for any such Claims or Direct Losses pursuant to Section 8.9(b)),

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and provided that such Claims or Direct Losses do not arise or result (directly or indirectly) from any Design-Builder Non-Excusable Event;

- (e) the Province and/or the Province Indemnified Persons, as the case may be, have received or are entitled to receive insurance proceeds in respect of such Claims and Direct Losses under the Required Insurance;
- (f) the Claims or Direct Losses relate to rent, user fees, property taxes (if any) or occupancy costs that are or become payable by the Province or BCTFA under Project Site Agreements or Project Site Encumbrances to the extent that the Design-Builder is not obligated to pay such amounts pursuant to Section 5.3 [Exception to the Design-Builder Responsibilities] of Schedule 8;
- (g) the Claims or Direct Losses consist of compensation that the Province has paid or is obligated to pay to the Design-Builder under Section 8.10 [Sharing of Increased Recoverable Expenditures in Specified Circumstances], to the extent that such Claims or Direct Losses do not arise or result (directly or indirectly) from any Design-Builder Non-Excusable Event;
- (h) the Claims or Direct Losses arise as a result of or in connection with any Non-Foreseeable Contamination or Province Subsequent Contamination, and do not arise as a result of or in connection with:
 - (i) a Design-Builder Non-Excusable Event in the performance or non-performance of the Design-Builder's Environmental Obligations with respect to such Contamination; or
 - (ii) the Design-Builder or any person for whom the Design-Builder is in law responsible causing, contributing to or exacerbating any such Non-Foreseeable Contamination or Province Subsequent Contamination; or
- (i) the Claims or Direct Losses consist of Claims made by the SFPR Concessionaire under the SFPR Concession Agreement, to the extent that such Claims or Direct Losses do not arise or result (directly or indirectly) from any Design-Builder Non-Excusable Event, including in the performance or non-performance of the Design-Builder's obligations under Schedule 18 [Interface Requirements].

9.3 Effect and Limitation of Design-Builder's Indemnities and Liabilities

- (a) Subject to Section 9.12 [No Double Compensation]:
 - (i) the Design-Builder's liability to the Province and the Province Indemnified Persons, or any of them, under any indemnity in this Agreement is without prejudice to any other right or remedy available to the Province and the Province Indemnified Persons, or any of them, provided that any Claim of the Province against the Design-Builder in respect of the subject matters of the indemnity in Section 9.1 [Indemnification by Design-Builder], if made in tort or for breach of contract rather than for indemnification under Section 9.1 [Indemnification by Design-Builder], shall be subject to the exceptions set out in Section 9.2 [Exceptions to Indemnification by Design-Builder] to the same extent as if the

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Claim had been made under Section 9.1 [Indemnification by Design-Builder];
and

- (ii) any obligation of the Design-Builder to indemnify and hold harmless under any provision of this Agreement is in addition to and not in substitution for or in limitation of any other obligation of the Design-Builder to indemnify and hold harmless under any other provision of this Agreement.
- (b) Subject to Section 9.3(c), but notwithstanding any other provision of this Agreement, the maximum liability of the Design-Builder for Delay Liquidated Damages shall not exceed
- (c) The limitation of liability set out in Section 9.3(b) shall not apply to liabilities that arise out of any of the following:
- (i) abandonment, gross negligence, fraud and fraudulent misrepresentations or wilful default or wilful misconduct of the Design-Builder or any person for whom the Design-Builder is in law responsible; and
 - (ii) any Claim or sum actually recovered by the Design-Builder through the Required Insurance, or which could have been so recovered if the Design-Builder had maintained the Required Insurance as required in accordance with this Agreement.
- (d) Subject to Section 9.3(e), but notwithstanding any other provision of this Agreement, the maximum aggregate liability of the Design-Builder for any and all damages, Direct Losses, Claims, indemnifications, liabilities, insurance deductibles, or other obligations of any kind whatsoever arising under or related to this Agreement or the performance of the Project Work, shall not exceed 50% of the Contract Price.
- (e) The limitation of liability set out in Section 9.3(d) is not intended to limit or otherwise detract from the obligation of the Design-Builder to perform the Project Work for the Contract Price (including cost overruns), and shall not apply to liabilities that arise out of any of the following:
- (i) Claims by third parties (other than the Province, the Province Indemnified Persons or any Subcontractor);
 - (ii) damage to or destruction of real property or tangible personal property;
 - (iii) bodily injury or death;
 - (iv) abandonment, gross negligence, fraud and fraudulent misrepresentations or wilful default or wilful misconduct of the Design-Builder or any person for whom the Design-Builder is in law responsible;
 - (v) in respect of breach of statutory duty or non-compliance with Law by the Design-Builder or any person for whom the Design-Builder is in law responsible;

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- (vi) in respect of any breach by the Design-Builder of Section 15.1 [Confidentiality]; and
- (vii) any Claim or sum actually recovered by the Design-Builder through the Required Insurance, or which could have been so recovered if the Design-Builder had maintained the Required Insurance as required in accordance with this Agreement.

9.4 Conduct of Claims Indemnified by Design-Builder

- (a) If the Province or any Province Indemnified Person (in this Section 9.4 individually referred to as an “**Indemnified Party**” and collectively referred to as the “**Indemnified Parties**”) receives any notice, demand, letter or other document concerning any Claim from which it appears that the Indemnified Party is or may become entitled to indemnification by the Design-Builder under this Agreement, the Indemnified Party shall give notice to the Design-Builder as soon as reasonably practicable and in any event within 30 days after receipt thereof, provided that a failure by an Indemnified Party to give such notice and particulars of a Claim within such time shall not adversely affect the rights of the Indemnified Party under the applicable indemnity except to the extent that the Design-Builder establishes that such failure has materially and adversely affected or prejudiced the ability of the Design-Builder to defend or contest the Claim.
- (b) Subject to Sections 9.4(c), (d), (e), (f) and (g), on the receipt of a notice delivered by an Indemnified Party pursuant to Section 9.4(a) the Design-Builder shall, in its discretion, be entitled to resist the Claim that is the subject of the notice, in the name of the Indemnified Party or the Indemnified Parties at the Design-Builder’s own expense, and have the conduct of any defence, dispute, compromise or appeal of the Claim (including any arbitration proceedings in respect thereof) and of any incidental negotiations. The Indemnified Parties shall give the Design-Builder and its counsel all reasonable cooperation, access and assistance for the purposes of considering and resisting such Claim including providing or making available to the Design-Builder and its counsel documents and information and witnesses for attendance at examinations for discovery and trials, subject always to any and all applicable Laws and solicitor and client privilege, and the Design-Builder shall pay all costs and expenses incurred by the Indemnified Parties in providing such cooperation, access and assistance.
- (c) The defence and any other legal proceedings in respect of any Claim which the Design-Builder exercises its discretion to resist in accordance with Section 9.4(b) shall be undertaken through legal counsel, and shall be conducted in a manner, acceptable to the Indemnified Party and the Design-Builder, acting reasonably. If:
 - (i) the Design-Builder and an Indemnified Party are or become parties to the same Claim and the representation of all parties by the same counsel would be inappropriate due to differing interest or a conflict of interest;
 - (ii) a conflict of interest or a perceived conflict of interest exists between the interests of an Indemnified Party and the Design-Builder or some other person who may be represented by counsel retained by the Design-Builder;

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- (iii) it appears that an Indemnified Party might not be entitled to indemnification by the Design-Builder in respect of all of the liability arising out of the Claim, unless the Design-Builder agrees on a with prejudice basis that all liability of the Indemnified Party arising out of the Claim is covered by the applicable indemnity; or
- (iv) the Design-Builder fails to comply in any material respect with the provisions of Section 9.4(d),

then the Indemnified Party shall be represented by separate counsel selected by the Indemnified Party and the indemnity obligations of the Design-Builder with respect to the Claim (including with respect to the cost of such separate legal representation) shall continue to apply and all reasonable costs and expenses (including reasonable actual legal fees and expenses) of the Indemnified Party doing so shall be included in the indemnity from the Design-Builder. An Indemnified Party may retain separate counsel to act on its behalf in respect of the Claim in circumstances other than those described in the immediately preceding sentence, in which event the indemnity obligations of the Design-Builder with respect to the Claim shall continue to apply but the fees and disbursements of such separate counsel shall be paid by the Indemnified Party. In any case where an Indemnified Party is represented by separate counsel, the Design-Builder and its counsel shall (at the cost of the Design-Builder) give the Indemnified Party and its counsel all reasonable cooperation, access and assistance including providing or making available to the Indemnified Party and its counsel documents and information and witnesses for attendance at examinations for discovery and trials, subject always to any and all applicable Laws and solicitor and client privilege. For greater certainty, the representation of an Indemnified Party by separate counsel as contemplated in this Section 9.4(c) and actions taken by such separate counsel in the course of such representation, including attendance at examinations, hearings and trials, shall not constitute a taking over of the conduct of the relevant legal proceedings by the Indemnified Party for the purposes of Section 9.4(f).

- (d) With respect to any Claim which the Design-Builder exercises its discretion to resist in accordance with Section 9.4(b):
 - (i) the Design-Builder shall keep the Indemnified Parties fully informed and consult with the Indemnified Parties about the conduct of the Claim;
 - (ii) to the extent that an Indemnified Party is not entitled to be indemnified by the Design-Builder for all of the liability arising out of the subject matter of the Claim, no action shall be taken pursuant to Section 9.4(b) that increases the amount of any payment to be made by the Indemnified Party in respect of that part of the Claim that is not covered by the indemnity from the Design-Builder;
 - (iii) the Design-Builder shall not pay or settle or make any admission of liability in respect of such Claim, whether before or after a suit, if any, is commenced, without the prior written consent of the Indemnified Party, such consent not to be unreasonably withheld or delayed;

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- (iv) the Design-Builder shall not bring the name of the Indemnified Party into disrepute; and
 - (v) the Design-Builder shall resist the Claim with all due diligence and in a timely manner.
- (e) If:
- (i) within 30 days after the notice from the Indemnified Party under Section 9.4(a) the Design-Builder fails to notify the Indemnified Party of its intention to resist a Claim pursuant to Section 9.4(b); or
 - (ii) the Design-Builder exercises its discretion under Section 9.4(b) not to resist a Claim,

the Indemnified Party shall be entitled to resist such Claim in the name of the Indemnified Party or the Indemnified Parties or in the name of the Design-Builder and have the conduct of any defence, dispute, compromise or appeal of the Claim (including any arbitration proceedings in respect thereof) and of any incidental negotiations, and to pay or settle the Claim on such terms as it may think fit, without prejudice to its right to indemnification by the Design-Builder (including with respect to the costs and expenses of resisting the Claim) and its other rights and remedies under this Agreement, but subject to the other provisions of this Agreement including Sections 3.1 [Mitigation By Province] and 9.10 [Costs and Expenses]. If the Indemnified Party has conduct of the Claim pursuant to this Section 9.4(e), the Indemnified Party shall keep the Design-Builder fully informed and consult with the Design-Builder about the conduct of the Claim.

- (f) The Indemnified Party shall be free at any time to give notice to the Design-Builder that the Indemnified Party is taking over the conduct of any defence, dispute, compromise or appeal of any Claim that is subject to Section 9.4(b) or of any incidental negotiations. Upon receipt of such notice the Design-Builder shall promptly take all steps necessary to transfer the conduct of such Claim to the Indemnified Party and shall provide the Indemnified Party with all reasonable cooperation, access and assistance (including providing or making available to the Indemnified Party and its counsel documents and information and witnesses for attendance at examinations for discovery and trials, subject always to any and all applicable Laws and solicitor and client privilege) for the purposes of considering and resisting such Claim. If the Indemnified Party gives any notice pursuant to this Section 9.4(f), then, except as otherwise expressly provided by this Agreement, the Design-Builder shall be released from its indemnity in favour of such Indemnified Party in respect of such Claim except where such notice was given by the Indemnified Party as a consequence of the failure of the Design-Builder to resist the Claim with all due diligence and in a timely manner or to otherwise perform its obligations in accordance with this Section 9.4.
- (g) Notwithstanding the foregoing, all parties shall comply with the requirements of any insurer who may have an obligation to indemnify any of the parties in respect of a Claim, and the rights of any party to have conduct of any Claim shall be subject to the rights of such insurer under the applicable policy of insurance.

9.5 Indemnification by the Province

Subject to Sections 6.4 [Deductibles], 6.6 [Release of the Province for Insured Loss] and 9.7 [Exceptions to Indemnification by the Province], the Province shall indemnify and hold harmless the Design-Builder and the Design-Builder Indemnified Persons, and each of them, from and against any and all Claims and Direct Losses at any time suffered or incurred by, or brought or made against, the Design-Builder and the Design-Builder Indemnified Persons, or any of them, to the extent resulting from any negligent act or negligent omission of the Province or BCTFA or any person for whom the Province is in law responsible in relation to the Project Work, the Project Site or the Project Infrastructure, other than Claims and Direct Losses caused by, arising out of, relating to or resulting from or in connection with:

- (a) any negligent act or negligent omission of the Province or BCTFA or any person for whom the Province is in law responsible referred to in either of Sections 2.13(a)(ii) or 2.15 [Disclosed Data];
- (b) the matters referred to in Section 9.1(c) to the extent any such Claim or Direct Loss has not been caused or contributed to by the failure of the Province or BCTFA to perform its obligations in accordance with Schedule 8 [Lands];
- (c) negligent acts or negligent omissions occurring prior to the Effective Date or after the Termination Date;
- (d) any Contamination, or any migration or leaching of Contamination, or any remediation, handling or legal requirement of any Governmental Authority in respect of Contamination, provided this exclusion shall not prejudice the Design-Builder's rights under Section 9.6 [Limited Province Indemnity for Contamination]; and
- (e) Claims and Direct Losses arising as a result of or in connection with any negligent act or negligent omission of the Province or any person for whom the Province is in law responsible in the course of taking action under any of Sections 11.4(a), 11.4(b) and 11.5(a), except to the extent of any failure of the Province or any Third Party Contractor engaged by the Province for the purposes of exercising the Province's rights under any of those Sections to comply with all applicable Laws and Permits in the course of exercising the Province's rights under any of those Sections.

9.6 Limited Province Indemnity for Contamination

Subject to Sections 6.4 [Deductibles], 6.6 [Release of the Province for Insured Loss] and 9.7 [Exceptions to Indemnification by the Province], the Province shall, solely for the purpose of holding the Design-Builder and the Design-Builder Indemnified Persons harmless against any Relevant Third Party claim (but not so as to give rise to or constitute any separate or new cause of action against the Province aside from any cause of action for recovery of such losses or damages awarded by a court to such Relevant Third Party against the Design-Builder or the Design-Builder Indemnified Persons pursuant to such Relevant Third Party claim), indemnify and hold harmless the Design-Builder and the Design-Builder Indemnified Persons in respect of any Claims and Direct Losses arising from any damage, injury or other harm suffered by such Relevant Third Party and/or Relevant Property that was caused by Existing Contamination or Province Subsequent Contamination that migrated or leached into or onto the Relevant Property, except to the extent such migration or leaching of such Existing Contamination or Province Subsequent Contamination (and/or damage, injury or other harm suffered) was caused or contributed to by any act or omission of the Design-Builder or any person for whom the Design-Builder

is in law responsible after the Design-Builder had knowledge of the Existing Contamination or Province Subsequent Contamination, as the case may be.

9.7 Exceptions to Indemnification by the Province

The obligations of the Province to indemnify under Section 9.5 [Indemnification by the Province] or Section 9.6 [Limited Province Indemnity for Contamination] shall not apply to any Claims or Direct Losses to the extent that:

- (a) the Claims or Direct Losses are directly attributable to any Design-Builder Non-Excusable Event; or
- (b) the Claims or Direct Losses are otherwise compensated for or eligible for compensation or other relief under the terms of this Agreement (including Part 7 [Province Changes and the Design-Builder Proposals], Part 8 [Supervening Events] and Schedule 13 [Compensation on Termination]).

9.8 Limitation of Province Liability

Neither the Province nor BCTFA shall under any circumstances be liable to the Design-Builder or any of the Design-Builder Indemnified Persons or any persons for whom the Design-Builder is in law responsible, whether in contract, tort, by statute or otherwise, and whether or not arising from any negligent act or negligent omission on the part of the Province or BCTFA or any persons for whom the Province is in law responsible, for any Claims or Losses of any person caused by, arising out of, relating to or resulting from or in connection with the Project Work or any Contamination. The foregoing limitation of liability shall not apply in relation to any liability of the Province for:

- (a) Claims and Direct Losses to the extent the Province must indemnify the Design-Builder or any of the Design-Builder Indemnified Persons therefor under Sections 9.5 [Indemnification by the Province] or 9.6 [Limited Province Indemnity for Contamination];
- (b) any failure by the Province or BCTFA to make proper payment to the Design-Builder in accordance with the terms of this Agreement; or
- (c) any breach in the observance or performance of any of its obligations under this Agreement (other than payment obligations) by the Province or BCTFA, except where the Design-Builder has an express remedy under this Agreement in respect of such breach, which remedy shall be exhaustive of the Design-Builder's rights in respect of such breach.

9.9 Conduct of Claims Indemnified by the Province

- (a) If the Design-Builder or any Design-Builder Indemnified Person (in this Section 9.9 individually referred to as an "**Indemnified Party**" and collectively referred to as the "**Indemnified Parties**") receives any notice, demand, letter or other document concerning any Claim from which it appears that the Indemnified Party is or may become entitled to indemnification by the Province under this Agreement, or to compensation by the Province in respect of a Supervening Event under Part 8 [Supervening Events], the Indemnified Party shall give notice to the Province as soon as reasonably practicable and

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in any event within 30 days after receipt thereof or in accordance with Part 8 [Supervening Events], if applicable, provided that, subject to Section 8.12 [Delay in Notification], a failure by an Indemnified Party to give such notice and particulars of a Claim within such time shall not adversely affect the rights of the Indemnified Party under the applicable indemnity or compensation provision except to the extent that the Province establishes that such failure has materially and adversely affected or prejudiced the ability of the Province to defend or contest the Claim.

- (b) Subject to Sections 9.9(c), (d), (e) and (f), on the receipt of a notice delivered by an Indemnified Party pursuant to Section 9.9(a) the Province shall, in its discretion, be entitled to resist the Claim that is the subject of the notice, in the name of the Indemnified Party or the Indemnified Parties at the Province's own expense, and have the conduct of any defence, dispute, compromise or appeal of the Claim (including any arbitration proceedings in respect thereof) and of any incidental negotiations. The Indemnified Parties shall give the Province and its counsel all reasonable cooperation, access and assistance for the purposes of considering and resisting such Claim including providing or making available to the Province and its counsel documents and information and witnesses for attendance at examinations for discovery and trials, subject always to any and all applicable Laws and solicitor and client privilege, and the Province shall pay all costs and expenses incurred by the Indemnified Parties in providing such cooperation, access and assistance.
- (c) The defence and any other legal proceedings in respect of any Claim which the Province exercises its discretion to resist in accordance with Section 9.9(b) shall be undertaken through legal counsel, and shall be conducted in a manner, acceptable to the Indemnified Party and the Province, acting reasonably. If:
 - (i) the Province and/or BCTFA and an Indemnified Party are or become parties to the same Claim and the representation of all parties by the same counsel would be inappropriate due to differing interest or a conflict of interest;
 - (ii) a conflict of interest or a perceived conflict of interest exists between the interests of an Indemnified Party and the Province and/or BCTFA or some other person who may be represented by counsel retained by the Province and/or BCTFA;
 - (iii) it appears that an Indemnified Party might not be entitled to indemnification or compensation by the Province in respect of all of the liability arising out of the Claim, unless the Province agrees on a with prejudice basis that all liability of the Indemnified Party arising out of the Claim is covered by the applicable indemnity or compensation provision; or
 - (iv) the Province fails to comply in any material respect with the provisions of Section 9.9(d),

then the Indemnified Party shall be represented by separate counsel selected by the Indemnified Party and the indemnity or compensation obligations of the Province, as applicable, with respect to the Claim (including with respect to the cost of such separate legal representation) shall continue to apply and all reasonable costs and expenses

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(including reasonable actual legal fees and expenses) of the Indemnified Party doing so shall be included in the indemnity or compensation from the Province. An Indemnified Party may retain separate counsel to act on its behalf in respect of the Claim in circumstances other than those described in the immediately preceding sentence, in which event the indemnity or compensation obligations of the Province, as applicable, with respect to the Claim shall continue to apply but the fees and disbursements of such separate counsel shall be paid by the Indemnified Party. In any case where an Indemnified Party is represented by separate counsel, the Province and BCTFA and its or their counsel shall (at the cost of the Province) give the Indemnified Party and its counsel all reasonable cooperation, access and assistance including providing or making available to the Indemnified Party and its counsel documents and information and witnesses for attendance at examinations for discovery and trials, subject always to any and all applicable Laws and solicitor and client privilege.

- (d) With respect to any Claim which the Province exercises its discretion to resist in accordance with Section 9.9(b):
- (i) the Province shall keep the Indemnified Parties fully informed and consult with the Indemnified Parties about the conduct of the Claim;
 - (ii) to the extent that an Indemnified Party is not entitled to be indemnified or compensated by the Province for all of the liability arising out of the subject matter of the Claim, no action shall be taken pursuant to Section 9.9(b) which increases the amount of any payment to be made by the Indemnified Party in respect of that part of the Claim that is not covered by the indemnity or compensation provision from the Province;
 - (iii) the Province shall not pay or settle or make any admission of liability in respect of such Claim, whether before or after a suit, if any, is commenced, without the prior written consent of the Indemnified Party, such consent not to be unreasonably withheld or delayed;
 - (iv) the Province shall not bring the name of the Indemnified Party into disrepute; and
 - (v) the Province shall resist the Claim with all due diligence and in a timely manner.
- (e) If:
- (i) within 30 days after the notice from the Indemnified Party under Section 9.9(a) the Province fails to notify the Indemnified Party of its intention to resist a Claim pursuant to Section 9.9(b); or
 - (ii) the Province exercises its discretion under Section 9.9(b) not to resist a Claim,

the Indemnified Party shall be entitled to resist such Claim in the name of the Indemnified Party or the Indemnified Parties or in the name of the Province and have the conduct of any defence, dispute, compromise or appeal of the Claim (including any arbitration proceedings in respect thereof) and of any incidental negotiations, and to pay or settle such Claim on such terms as it may think fit, without prejudice to its right to

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indemnification or compensation by the Province and its other rights and remedies under this Agreement, but subject to the other provisions of this Agreement including Sections 4.10 [Mitigation By Design-Builder] and 9.10 [Costs and Expenses]. If the Indemnified Party has conduct of the Claim pursuant to this Section 9.9(e), the Indemnified Party shall keep the Province fully informed and consult with the Province about the conduct of the Claim.

- (f) Notwithstanding the foregoing, all parties shall comply with the requirements of any insurer who may have an obligation to indemnify any of the parties in respect of a Claim, and the rights of any party to have conduct of any Claim shall be subject to the rights of such insurer under the applicable policy of insurance.

9.10 Costs and Expenses

Where in accordance with any provision of this Agreement a party is entitled to claim indemnification or reimbursement from another party for any costs, expenses or other amounts, the indemnifying or reimbursing party shall be obligated to provide indemnification or reimbursement only to the extent that the costs, expenses or other amounts claimed were reasonably incurred having regard to all relevant circumstances at the time.

9.11 No Liability for Irrecoverable Losses

Notwithstanding any other provision of this Agreement, no party to this Agreement shall be obligated to pay to any other party to this Agreement, or liable to any other party to this Agreement for, whether in contract or in tort or on any other basis whatsoever, any Irrecoverable Losses suffered or incurred by such other party to this Agreement.

9.12 No Double Compensation

Notwithstanding any other provision of this Agreement, but without prejudice to the rights of a party to terminate this Agreement in accordance with its terms, no party shall be entitled to recover compensation or make a Claim under this Agreement in respect of any Loss that it has incurred (or any failure of another party) to the extent that it has already been compensated in respect of that Loss or failure pursuant to this Agreement or otherwise, and, for the purposes of this Section 9.12, Performance Incentive Payments and Non-Compliance Event Payments shall only be considered compensation to the Province or BCTFA in respect of the breaches or failures by the Design-Builder or other events or circumstances that give rise thereto to the extent such payments or deductions are made, and such payments or deductions shall be without prejudice to the right of the Province to claim and recover from the Design-Builder, subject to the other provisions of this Agreement, Direct Losses to the extent any such payment or deduction does not compensate the Province in full for such Direct Losses, and such right of the Province is hereby expressly preserved.

9.13 No Compensation Where Insured

Notwithstanding anything to the contrary in this Agreement, except in the case of compensation for Claims and Direct Losses under Part 8 [Supervening Events] (in which case Section 8.11 [Effect of Insurance] applies), and in the case of compensation on termination under Schedule 13 [Compensation on Termination] (in which case Section 3.1 [No Compensation to Extent of Insurance] of Schedule 13 applies), neither the Province nor BCTFA shall be liable to the Design-Builder, whether in contract or in

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tort or on any other basis whatsoever, for any Claims or Direct Losses, and any amounts payable by the Province or BCTFA shall be reduced, to the extent, in respect of such Claims or Direct Losses:

- (a) that:
 - (i) the Design-Builder recovers or is entitled to recover under any Required Insurance, or would have been able to recover under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement; or
 - (ii) the Claims or Direct Losses are insured against, or required to be insured against under any Required Insurance, or would have been insured against under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement;

whether or not such Required Insurance was in fact effected or, if effected, was vitiated, and whether vitiated as a result of any act or omission of the Design-Builder (or of any person for whom the Design-Builder is in law responsible) including, but not limited to, by reason of non-disclosure or under-insurance or failure or insolvency of the insurer, or for any other reason (excluding only vitiation caused by any act or omission of the Province or any person for whom the Province is in law responsible, but only to the extent non-vitiation terms protecting against vitiation in the case of such act or omission are not required by the terms of this Agreement to be included in the applicable insurance policies);

- (b) that the Design-Builder recovers or is entitled to recover under any policy of insurance that is not Required Insurance but that the Design-Builder has in fact taken out and maintained;
- (c) that there are proceeds of insurance held by the Province that are (subject to the Design-Builder fulfilling all conditions to the disbursement thereof) available for satisfaction of such Claims or Direct Losses, in whole or in part;
- (d) that the Province makes or authorizes, or is obligated under this Agreement (subject to the Design-Builder fulfilling all conditions thereto) to make or authorize, payment to or for the account of or on behalf of the Design-Builder, under Section 6.18 [Application of Proceeds of Insurance]; or
- (e) of any amounts in respect of deductibles and waiting periods under any insurance referred to in either of Sections 9.13(a) and (b) for which the Design-Builder is responsible.

9.14 Survival

The provisions of this Part 9 and each other indemnity contained in this Agreement shall survive the expiration or termination of this Agreement.

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**PART 10
PAYMENTS**

10.1 Contract Price and Payments

- (a) The Design-Builder shall perform its obligations under this Agreement for the contract price of \$185,000,000.00 (the “**Contract Price**”). The Contract Price is not subject to change or adjustment except as expressly provided in Section 2.5 [Consequences of Province Changes] of Schedule 11. The Design-Builder agrees to accept the Contract Price as full payment and reimbursement to the Design-Builder for performing the Project Work, including all labour, services, materials, equipment and overhead required to perform the Project Work, all financing costs and profit.
- (b) Subject to the Design-Builder meeting the requirements for payment set out in this Agreement, the Province will pay the Design-Builder the amounts expressly provided for in this Agreement in accordance with the provisions of this Agreement.
- (c) The obligations of the Design-Builder to make payments under this Agreement are cumulative and in addition to, and not in substitution for or to the exclusion of, each or any other payment obligation of the Design-Builder hereunder.
- (d) No payment of or on account of any amount by the Province to the Design-Builder in accordance with this Agreement, including the release by the Province of any holdback amounts hereunder, or partial or entire use or occupancy of the Project Infrastructure, the Project Site or any part or parts thereof by the Province or any other person, and no approval of any invoice, report or application submitted by the Design-Builder to the Province for any such payment, shall constitute or be construed as constituting a final evaluation or an acceptance by the Province of any Project Work as being in accordance or compliance with this Agreement
- (e) Notwithstanding any payment by the Province to the Design-Builder in accordance with this Agreement, including the release by the Province of any holdback amounts hereunder, and notwithstanding any review, inspection, enquiry, discussions or negotiations in respect of an invoice, report or application submitted by the Design-Builder to the Province for any such payment, the Design-Builder is and at all times shall remain responsible for providing, performing and carrying out the Project Work in accordance and compliance with this Agreement.

10.2 Additional Payments

If it is agreed or determined in accordance with this Agreement that a party is entitled to payment from another party in respect of any of:

- (a) a Province Change or Value Engineering Proposal (other than Minor Works and subject to Section 2.5 [Consequences of Province Changes] of Schedule 11) under Part 7 [Province Changes and the Design-Builder Proposals];
- (b) a Compensation Event (other than in the circumstances described in Section 8.3(b)(ii) under Part 8 [Supervening Events];

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- (c) a Force Majeure Event (which, for greater certainty, shall only be in the circumstances described in Section 8.6(a)(ii)) under Part 8 [Supervening Events]; and
- (d) any of the events described in Section 8.10 [Sharing of Increased Recoverable Expenditures in Specified Circumstances],

then the affected party may make written demand for such payment from time to time following such agreement or determination and, in respect of any Direct Losses, after such Direct Losses have been incurred, and such payment will be due and payable within 30 days of delivery of written demand supported with all relevant information required in accordance with this Agreement.

10.3 Province Rights to Audit

Without limiting any other rights of the Province to audit any other aspect of the Project Work in accordance with this Agreement, the Design-Builder shall, before, during and at any time after the payment of any lump sum contemplated in Section 10.2 [Additional Payments], ensure that the Province has unrestricted rights of audit over all documentation (including any aspect of the calculation of any such lump sum) used in connection with, or relevant to, the calculation of any such lump sum.

10.4 Province's Right of Set-Off

Subject to Section 3.3 [Rights of Set-Off] of Schedule 13, and without prejudice to and without limiting or derogating from any statutory right of the Province to withhold any sum of money due or becoming due to the Design-Builder, the Province and BCTFA may set off any liquidated amounts owing by the Design-Builder to the Province or BCTFA under this Agreement or any of the other Province Project Documents (which, without limiting any other provision of the Agreement, shall be deemed to include the amount of any payment made by the Province to any person which is the responsibility of the Design-Builder under this Agreement) against any payments due from the Province or BCTFA to the Design-Builder under this Agreement.

10.5 Payments in Canadian Dollars

All payments under this Agreement shall be made in Canadian Dollars for value on or before the due date to the bank account of the recipient (located in the City of Vancouver or the City of Victoria, British Columbia) as specified by the recipient from time to time with reference to this Section 10.5.

10.6 Due Date for Payments

- (a) If no date is specified for the making of any payment by a party under this Agreement, such party shall make such payment on or before the date that is 30 days after the receipt by such party of the demand, invoice, debit note or Report to which such payment relates, or the final determination of the amount of such payment by the parties in accordance with this Agreement, as the case may be.
- (b) If the date for making any payment under this Agreement falls on a day that is not a Business Day, the date for making such payment shall be extended to the next Business Day.

10.7 Taxes on Payments

- (a) For the purposes of this Section 10.7:
- (i) **“Change in Tax Law”** means a Change in Law relating to GST or PST, including the imposition of any successor or replacement tax for GST or PST;
 - (ii) **“Irrecoverable Tax”** means GST or PST:
 - (A) incurred by the Design-Builder in respect of the supply of any property or service to the Design-Builder which is consumed, used or supplied or to be consumed, used or supplied exclusively by the Design-Builder in the course of carrying out the Project Work; or
 - (B) required to be collected and remitted to any Governmental Authority by the Design-Builder in respect of the supply of any property or service by the Design-Builder to the Province made exclusively in the course of carrying out the Project Work,in each case to the extent that the Design-Builder is unable to collect or obtain any Recovery;
 - (iii) **“Recipient”** means a party to which a taxable supply is provided under this Agreement;
 - (iv) **“Recovery”** in relation to any GST or PST means recovery or elimination of liability for such GST or PST in any way, including by way of input tax credits, refunds, rebates, exemptions, remissions or any similar recovery for such GST or PST; and
 - (v) **“Supplier”** means a party providing a taxable supply under this Agreement.
- (b) Subject to this Section 10.7, including the provisions relating to a Change in Tax Law herein, all payments (including payments in kind) to be made by a party under this Agreement are:
- (i) exclusive of GST; and
 - (ii) inclusive of all Taxes (including PST) other than GST.
- (c) If any GST is imposed on a Recipient in connection with the provision of any taxable supply under this Agreement by a Supplier, the Recipient shall pay the GST to the Supplier and the Supplier shall remit the GST, all in accordance with the obligations of the Recipient and the Supplier under the *Excise Tax Act* (Canada).
- (d) The Design-Builder acknowledges and agrees that as and from the Effective Date it shall levy, collect and remit GST on the supply of the Project Work provided that if, following the Effective Date, the Province provides to the Design-Builder certification that according to Laws or agreement between the Province and the Federal Government it is no longer required to pay GST, the Design-Builder shall, at the later of the time that the

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Design-Builder receives such certification and the date the Province is no longer required to pay GST, cease levying and collecting GST on the supply of the Project Work.

- (e) Following receipt of an invoice therefor from the Design-Builder, the Province shall pay to the Design-Builder from time to time amounts equal to any Irrecoverable Tax if and to the extent such Irrecoverable Tax results solely from a Change in Tax Law as any such Irrecoverable Tax is incurred by the Design-Builder or required to be collected and remitted to any Governmental Authority, as the case may be, with the intent that the Design-Builder (including, for the purposes of this provision the Partners) will be placed in a position under this Agreement neither better nor worse than it would have been in had the Change in Tax Law not occurred, provided that all amounts paid under this Section 10.7(e) shall be grossed up by an amount equal to the amount of income tax actually payable in a Contract Year by the Design-Builder and/or the Partners that can be demonstrated by the Design-Builder results from being subjected to the Irrecoverable Tax and/or receipt of the payment under this Section 10.7(e) after taking into account any other income tax credits, deductions or relief to which the Design-Builder or the Partners may be eligible.
- (f) If, solely as a result of a Change in Tax Law, the Design-Builder becomes entitled to a Recovery in respect of GST or PST which was, prior to such Change in Tax Law, an Irrecoverable Tax that had been paid to the Design-Builder by the Province pursuant to Section 10.7(e), then the Design-Builder shall pay to the Province from time to time the amount or amounts of such Recovery to which the Design-Builder becomes entitled, to the extent required to place the Design-Builder in a position under this Agreement neither better nor worse than it would have been in had the Change in Tax Law not occurred.
- (g) Any payment required to be made by the Province to the Design-Builder pursuant to Section 10.7(e), or by the Design-Builder to the Province pursuant to Section 10.7(f), shall be paid by the relevant party within 10 Business Days following the delivery by the other applicable party of an invoice or debit note for such payment, provided that the Province shall not be required to pay any amount to the Design-Builder pursuant to Section 10.7(e) until the Design-Builder has delivered to the Province's Representative written details of the amount claimed and the grounds for and computation of the amount claimed and such further information, calculations, computations and documentation as the Province may reasonably require.
- (h) The Design-Builder shall provide to the Province's Representative any information, calculations, computations and documentation reasonably requested by the Province from time to time in relation to the amount of any GST or PST chargeable in accordance with this Agreement and payable by the Province to the Design-Builder or by the Design-Builder to the Province in accordance with this Agreement.

10.8 Payment of Disputed Amounts

- (a) A party shall have the right to dispute, in good faith, any amount specified as payable from one party to another in any demand, invoice, debit note or Report.

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- (b) Except as otherwise expressly provided in this Agreement, a party shall pay any undisputed portion of any amount that is the subject of a dispute to the other party in accordance with this Agreement, but any disputed portion or amount shall not be payable until the dispute is resolved in accordance with this Agreement.
- (c) If payment of any amount payable under this Agreement is delayed while the matter is in dispute in accordance with Section 10.8(a), upon resolution of such dispute a party shall pay any amount agreed or determined to be due by such party within 10 Business Days following such resolution, together with interest on such amount calculated at an interest rate that is 1% per annum over the Prime Rate at that time, compounded monthly from the time such amount originally became payable (but for such dispute) under this Agreement until the earlier of:
 - (i) the date of such payment in accordance with this Section 10.8(c); and
 - (ii) the due date for such payment under this Section 10.8(c).

For greater certainty, Section 10.10 [Interest on Overdue Amounts] shall apply to any amount payable pursuant to this Section 10.8(c) that is not paid within such 10 Business Days.

10.9 Inaccuracies in Payments

Subject to Section 3.4 [Full and Final Settlement] of Schedule 13, if there is any inaccuracy in any demand, invoice, debit note or Report issued by a party pursuant to this Agreement providing for the payment of an amount from one party to the other, whether determined upon an examination by the Province pursuant to Section 1.6 [Audit and Inspection] of Schedule 17 or otherwise:

- (a) the necessary adjustments in such demand, invoice, debit note or Report and resulting payment shall be made by the applicable party within 10 Business Days after the date such inaccuracy is established by agreement or pursuant to the Dispute Resolution Procedure; and
- (b) if such inaccuracy results in an underpayment or overpayment being made by one party to another party (as against the sum that would have been paid but for such inaccuracy), then, if the paying party or the receiving party, as the case may be, issued the demand, invoice, debit note or Report containing such inaccuracy, the paying party or the receiving party shall, in addition to paying such underpayment or re-paying such overpayment, as the case may be, to such other party, pay interest thereon at a rate per annum equal to the Default Rate from the date of payment by the relevant party to such other party pursuant to the original demand, invoice, debit note or Report to the date of payment of such underpayment by the paying party or the date of repayment of such overpayment by the receiving party, as the case may be.

10.10 Interest on Overdue Amounts

If payment of any amount payable under this Agreement is not made when due (including payments payable pursuant to Schedule 13 [Compensation on Termination] and any payments required pursuant to Sections 10.7(g), 10.8(c) and 10.9(a)), interest shall, unless another interest rate is indicated

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in this Agreement, be payable on such amount at the Default Rate and shall be calculated from the date due under this Agreement until paid, compounded monthly.

10.11 Interest without Prejudice

The right of a party to receive interest in respect of the late payment of any amount due under this Agreement is without prejudice to any other rights that party may have under this Agreement.

10.12 Payment of Interest by Province

Notwithstanding any other term of this Agreement, the payment of interest by the Province pursuant to this Agreement is subject to the provisions of the *Financial Administration Act* (British Columbia).

PART 11 PROVINCE'S ACCESS, MONITORING AND STEP-IN RIGHTS

11.1 Province Access

The Province, BCTFA, the Province's Representative, the Federal Government, the Port Authority, and any contractors, consultants or other persons authorized by any of them, including Third Party Contractors, shall:

- (a) have unrestricted access at all reasonable times throughout the Term to the Project Site and the Project Infrastructure in order to do any or all of the following:
 - (i) perform any obligations or functions or exercise any rights of the Province's Representative, the Province or BCTFA under this Agreement;
 - (ii) fulfil any statutory, public or other powers, authorities, discretions, duties or functions;
 - (iii) conduct any study, test or trial for purposes of research initiated by the Province or BCTFA or any other person authorized by the Province or BCTFA; and
 - (iv) construct, operate, manage, maintain, repair, rehabilitate or reconstruct on the Project Site any Infrastructure other than, prior to the Substantial Completion Date, the Project Infrastructure;
- (b) have reasonable access at all reasonable times and upon reasonable prior notice to any site or workshop where Plant is being manufactured for the purposes of general inspection and auditing and of attending any test or investigation being carried out in respect of the Project Work; and
- (c) have the right to attend regular Project Site and other similar progress meetings,

provided that any access granted in accordance with this Section 11.1 shall be exercised in accordance with any health and safety procedures established by the Design-Builder pursuant to Sections 4.13 [Health and Safety Program] and 4.14 [Design-Builder's Occupational Health and Safety Obligations] for the time being in force in relation to the areas to which such access is granted, provided that nothing in

this Section 11.1 shall be construed so as to impede the proper performance of the roles, functions and duties of the Province and BCTFA as set out in this Agreement and under Laws.

11.2 Uncovering of Work

- (a) The Design-Builder shall ensure that the Province's Representative is afforded advance notice of and a full opportunity to witness inspection and test activity in accordance with the Inspection and Test Plan and other relevant provisions of this Agreement. If the Design-Builder does not provide such notice and opportunity, the Design-Builder shall at the request of the Province uncover any relevant part of the Project Work which has been covered up or otherwise put out of view or remove any relevant part of the Project Work that has been proceeded with in order to permit the Province to witness the relevant inspection or test activity. The Design-Builder shall bear all costs of any such uncovering or removal, regardless of whether or not any defect is discovered in the relevant Project Work.
- (b) The Province shall have the right to request the Design-Builder to open up and inspect any part or parts of the Project Work where the Province (following consultation with the Design-Builder) reasonably believes that such part or parts of the Project Work is or are defective or that the Design-Builder has failed to comply with the requirements of this Agreement, and the Design-Builder shall comply with such request. If the Province exercises such right, it shall consult with the Design-Builder as to the timing of the opening up and inspection of the relevant part or parts of the Project Work with a view to avoiding or, if unavoidable, minimizing any delay caused to the conduct of the remaining Project Work.
- (c) If the Province requires an uncovering of the Project Work pursuant to Section 11.2(b) and such Project Work is not subsequently found to be defective and is found to have complied with the requirements of this Agreement, then such uncovering of the Project Work shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply.

11.3 Increased Monitoring

- (a) Without prejudice to any other rights of the Province under this Agreement, if at any time during the Term:
 - (i) the Design-Builder is assigned 10 or more Default Points in any 12 calendar month period; or
 - (ii) a Design-Builder Default occurs; or
 - (iii) any material discrepancy, inaccuracy or error (including error by omission or incompleteness) is discovered by the Province or the Province's Representative in respect of any monthly report delivered by the Design-Builder to the Province in accordance with Part 6 [Periodic Reports and Payment Applications] of Schedule 10,

then the Province may by notice to the Design-Builder increase the level of its monitoring of the Design-Builder above that otherwise carried out by the Province under

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this Agreement, including pursuant to Section 4.4 [Province Monitoring] of Schedule 7, until such time as the Design-Builder has demonstrated to the reasonable satisfaction of the Province that it will perform and is capable of performing its obligations under this Agreement.

- (b) A notice to the Design-Builder provided by the Province's Representative pursuant to Section 11.3(a) shall specify the additional measures to be taken by the Province in monitoring the Design-Builder in response to the matters which led to such notice being sent.
- (c) If the Province carries out increased monitoring pursuant to this Section and requires the Design-Builder to pay the Province's costs and expenses in respect thereof pursuant to Section 11.3(d), and it is subsequently agreed or determined pursuant to the Dispute Resolution Procedure that the Province was not entitled to require the Design-Builder to pay the Province's costs and expenses in respect of such increased monitoring in accordance with this Section, then the payment by the Design-Builder of such Province costs and expenses shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply.
- (d) The Design-Builder shall pay to the Province on demand all costs and expenses incurred by the Province in carrying out increased monitoring under this Section 11.3, together with an administration fee equal to fifteen percent (15%) of such costs and expenses, and all without prejudice to any other rights of the Province.

11.4 Province's Emergency Rights

- (a) Without limiting any other rights of the Province under this Agreement or at Law, and whether or not the Province has then given notice of default or notice of termination in accordance with any provisions of this Agreement entitling it to do so or the Design-Builder has then given notice of termination in accordance with any provisions of this Agreement entitling it to do so, and regardless of any dispute with respect to whether or not there is a valid right or obligation to terminate, if at any time during the Term the Province reasonably believes that it needs to take action in relation to the Project Facilities or the Project Work or any part thereof due to the occurrence of an Emergency, then the Province may in its discretion do either or both of the following (but this shall not obligate the Province to mitigate, rectify or protect against, or attempt to mitigate, rectify or protect against, such Emergency or, after having commenced to mitigate, rectify or protect against or attempt to mitigate, rectify or protect against such Emergency, to continue to do so):
 - (i) upon notice from the Province to the Design-Builder (which notice shall not be required to be in writing and shall not be required where it is impracticable in the circumstances for the Province to give prior notice) take or cause to be taken all such steps and actions as the Province considers, in its discretion, are required to mitigate, rectify or protect against such Emergency and, to the extent and for the period necessary for such purposes, enter upon the Project Site and the Project Infrastructure or any part thereof to carry out or cause to be carried out any work, provided that the Province shall, and shall cause any applicable third parties engaged by it for the purposes of exercising the Province's rights under to this

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Section 11.4 to, comply with all applicable Laws and Permits and to carry out any action under this Section expeditiously; or

- (ii) by written notice from the Province to the Design-Builder, require the Design-Builder to take such steps as the Province considers, in its discretion, necessary or expedient to mitigate, rectify or protect against such Emergency including, if such Emergency has been caused or contributed to by a breach of any Subcontract, taking all action in respect of such Subcontract as the Province considers, in its discretion, necessary or expedient, and the Design-Builder shall use all reasonable efforts to comply with the Province's requirements as soon as reasonably practicable.
- (b) If the Province gives notice to the Design-Builder pursuant to Section 11.4(a)(ii) and the Design-Builder either:
- (i) does not confirm, within the time period specified by the Province in the notice given pursuant to Section 11.4(a)(ii) (or, if no such time period is specified, within five Business Days), that it is willing to take such steps as are referred to or required in such notice or present an alternative plan to the Province to mitigate, rectify and protect against such Emergency that the Province may accept or reject, in its discretion; or
 - (ii) fails to take the steps as are referred to or required in such notice or accepted alternative plan within such time as set out in such notice or accepted alternative plan or within such time as the Province, in its discretion, shall stipulate,

then the Province may, in addition to the ability to take the actions set out in Section 11.4(a), without further notice to the Design-Builder, to the extent and for the period necessary for such purpose, suspend the progress of the relevant Project Work, and suspend in whole or in part the relevant rights of the Design-Builder under this Agreement (including the rights of the Design-Builder under Section 2.5 [Access to and Responsibility for Project Site] and Schedule 8 [Lands] as applicable to the relevant Project Work), provided that any such suspension of the Design-Builder's rights shall cease on the date upon which the Province has completed mitigating, rectifying or protecting against such Emergency or notifies the Design-Builder that such suspension shall cease.

- (c) No action taken by the Province under Section 11.4(a) or 11.4(b) shall be deemed to be a termination of this Agreement or relieve the Design-Builder from any of its obligations under this Agreement (except to the extent any such obligation is fully performed by the Province or cannot reasonably be performed due to such action taken by the Province), and, subject to Section 11.4(d), the Province shall not incur any liability to the Design-Builder for any act or omission of the Province or any other person in the course of taking such action, except to the extent of any failure by the Province or any Third Party Contractor engaged by the Province for the purposes of exercising the Province's rights under this Section 11.4 to comply with all applicable Laws and Permits in the course of exercising the Province's rights under Section 11.4(a) or 11.4(b).

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- (d) To the extent that an Emergency has been caused by a Province Non-Excusable Event or a Compensation Event, any actions of the Province under this Section 11.4 in respect of such Emergency shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply.
- (e) Except where the Province carries out actions under this Section 11.4 in the event of an Emergency caused by a Province Non-Excusable Event or a Compensation Event, the Design-Builder shall pay to the Province on demand all costs and expenses incurred by the Province in carrying out such actions under this Section 11.4, including any costs paid by the Province to the Design-Builder in accordance with Section 11.6 [Availability of Certain Assets on Step-In], together with an administration fee equal to fifteen percent (15%) of such costs and expenses, and all without prejudice to any other rights of the Province.

11.5 Province's Other Step-In Rights

- (a) Without limiting any other rights of the Province under this Agreement or at Law, and whether or not the Province has then given notice of default or notice of termination in accordance with any provisions of this Agreement entitling it to do so or the Design-Builder has then given notice of termination in accordance with any provisions of this Agreement entitling it to do so, and regardless of any dispute with respect to whether or not there is a valid right or obligation to terminate, if at any time during the Term any one or more of the following events occurs:
 - (i) the Design-Builder has been assigned one or more Default Point pursuant to Section 5.4(b) or 5.4(c) of Schedule 10 [Payment and Performance Mechanism] and the matter or matters giving rise to the assignment of such Default Point(s) has not or have not been remedied within a reasonable time to the satisfaction of the Province, acting reasonably;
 - (ii) a Design-Builder Default occurs and the Province reasonably believes that such Design-Builder Default remains unremedied; or
 - (iii) the Province receives a Notice of Failure to Comply from the Design-Builder pursuant to Section 4.17(b),

then the Province may in its discretion do either or both of the following (but this shall not obligate the Province to remedy such matter or attempt to do so, or, after having commenced to remedy such matter or attempt to do so, to continue to do so):

- (iv) by five Business Days' notice to the Design-Builder, to the extent and for the period necessary to remedy such matter or matters, suspend the progress of any or all of the Project Work, and suspend in whole or in part the rights of the Design-Builder under this Agreement (including the rights of the Design-Builder under Section 2.5 [Access to and Responsibility for Project Site] and Schedule 8 [Lands]), provided that any such suspension of the Design-Builder's rights shall cease on the earlier of the date upon which the Province has completed remedying such matter or notifies the Design-Builder that such suspension shall cease; and

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- (v) upon notice to the Design-Builder, take or cause to be taken all such steps and actions as may be reasonably required to remedy such matter or matters and, to the extent and for the period necessary for such purpose, enter upon the Project Site and the Project Infrastructure or any part thereof to carry out any work, provided that the Province shall, and shall cause any Third Party Contractors engaged by the Province for the purposes of exercising the Province's rights under this Section 11.5 to, comply with all applicable Laws and Permits and to carry out any action under this Section expeditiously.
- (b) No action taken by the Province under Section 11.5(a) shall be deemed to be a termination of this Agreement or relieve the Design-Builder from any of its obligations under this Agreement (except to the extent any such obligation is fully performed by the Province or cannot reasonably be performed due to such action taken by the Province), and, subject to Section 11.5(c), the Province shall not incur any liability to the Design-Builder for any act or omission of the Province or any other person in the course of taking such action, except to the extent of any failure by the Province or any Third Party Contractor engaged by the Province for the purposes of exercising the Province's rights under this Section 11.5 to comply with all applicable Laws and Permits in the course of exercising the Province's rights under Section 11.5(a).
- (c) If the Province takes action under Section 11.5(a) and it is subsequently agreed or determined pursuant to the Dispute Resolution Procedure that the Province was not entitled to take such action in accordance with this Section 11.5, then the taking of any such action shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply.
- (d) Except where the Province carries out actions under this Section 11.5 in the circumstances contemplated in Section 11.5(a)(iii) or where Section 11.5(c) applies, the Design-Builder shall pay to the Province on demand all costs and expenses incurred by the Province in carrying out such actions, including any costs paid by the Province to the Design-Builder in accordance with Section 11.6 [Availability of Certain Assets on Step-In], together with an administration fee equal to fifteen percent (15%) of such costs and expenses, and all without prejudice to any other rights of the Province.

11.6 Availability of Certain Assets on Step-In

Where the Province exercises its rights under Section 11.4 [Province's Emergency Rights] or Section 11.5 [Province's Other Step-In Rights], for the duration of the exercise of such rights the Design-Builder shall, and shall cause its Subcontractors to, to the extent requested by the Province, make available to the Province or, at the direction of the Province to a third party designated by the Province, at a fair market price or rent, as the case may be, and at the risk of the Province, all facilities and all or any part of the stocks of material, road vehicles, spare parts, equipment and machinery (including Construction Plant) and other moveable property then owned or leased by or otherwise available to the Design-Builder or any of its Subcontractors that is required for the purposes of the exercise of such rights by the Province.

**PART 12
DESIGN-BUILDER DEFAULT AND PROVINCE REMEDIES**

12.1 Design-Builder Default

Each occurrence of any one or more of the following events or circumstances shall constitute a “**Design-Builder Default**”:

- (a) any Design-Builder Insolvency Event;
- (b) the abandonment of the Project by the Design-Builder;
- (c) the Design-Builder or any Partner ceasing to perform a substantial portion of its business or the suspension or non-performance of a substantial portion of the business of the Design-Builder or any Partner (except as a result of the exercise by the Province of its rights under Part 11 [Province’s Access, Monitoring and Step-In Rights], and except where such cessation, suspension or non-performance constitutes a Design-Builder Default referred to in Section 12.1(b)), whether voluntarily or involuntarily, that has or could reasonably be expected to have a material adverse effect on the performance by the Design-Builder of its obligations under this Agreement or any other Project Document, and such event or circumstance is not remedied by the resumption of business or the cessation of the suspension or non-performance of business, within 30 Business Days after the date notice to do so is given by the Province to the Design-Builder;
- (d) any Change in Ownership or Change in Control that is not permitted by Section 16.3 [Change in Control of Design-Builder];
- (e) any breach by the Design-Builder of Section 16.1 [Assignment by Design-Builder];
- (f) any breach of Section 4.5 [Prohibited Acts];
- (g) any failure by the Design-Builder to comply with Schedule 23 [Privacy Protection] in a material respect and such failure is not remedied within 30 Business Days after the date notice of such failure is given by the Province to the Design-Builder (and for the purposes of this paragraph such failure shall be considered remedied when the Design-Builder has taken steps satisfactory to the Province to mitigate the effects of the failure and has implemented measures satisfactory to the Province to prevent a recurrence of the failure);
- (h) any breach by the Design-Builder of Section 16.5 [Material Subcontracts], and such breach would, or might reasonably be expected to, or does, have any of the effects described or referenced in Section 2.6(b) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], except where such breach, such occurrence or such effects are capable of being remedied and such breach, such occurrence or such effects are in fact remedied within 30 Business Days after the date notice of such breach or such occurrence is given by the Province to the Design-Builder;
- (i) a sale, transfer, lease or other disposition by the Design-Builder or any Partner of the whole or any part (that is material in the context of the performance of the Design-Builder’s obligations under this Agreement) of its undertaking, property or assets by a

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single transaction or a number of transactions (whether related or not and whether at the same time or over a period of time) that has or could reasonably be expected to have a material adverse effect on the financial position of the Design-Builder or the performance by the Design-Builder of its obligations under this Agreement, except where such occurrence or the relevant material adverse effect is capable of being remedied and is in fact remedied within 30 Business Days after the date notice of such occurrence is given by the Province to the Design-Builder;

- (j) any representation or warranty made by the Design-Builder in Section 4.21 [Representations and Warranties of the Design-Builder] being incorrect in any material respect when made and the incorrectness of the fact or facts misrepresented has or might reasonably be expected to have a material adverse effect on the ability of the Design-Builder or the Province to perform their respective obligations, or the ability of the Province to exercise any of its rights, under this Agreement or any of the other Province Project Documents, except where such incorrect representation or warranty or the relevant material adverse effect is capable of being remedied and is in fact remedied within 60 Business Days after the date notice of such incorrect representation or warranty is given by the Province to the Design-Builder;
- (k) any Required Insurance is not taken out, maintained, paid for or renewed in accordance with Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements] (excluding for the avoidance of doubt any Required Insurance in respect of any risk that has become Uninsurable so long as such risk remains Uninsurable), or is cancelled by any insurer;
- (l) evidence that Required Insurance has in fact been taken out, maintained, paid for and renewed in accordance with Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements] (excluding for the avoidance of doubt any Required Insurance in respect of any risk that has become Uninsurable so long as such risk remains Uninsurable) is not provided to the Province in accordance with Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements];
- (m) a failure by the Design-Builder to comply with the requirements or directive of a final award (after all rights of further appeal have been exhausted or have expired) in a matter dealt with in accordance with the Dispute Resolution Procedure and such failure to comply is not remedied within 30 Business Days after the date notice of such non-compliance is given by the Province to the Design-Builder or within such longer period of time after the date such notice is given (if a longer period of time is reasonably required to comply) so long as the Design-Builder has commenced to comply within such 30 Business Days and proceeds with such compliance with all due diligence and continuity to completion;
- (n) at any time the Default Points Balance is 60 or more Default Points;
- (o) failure by the Design-Builder to achieve Substantial Completion on or before the Substantial Completion Longstop Date;
- (p) the aggregate liability of the Design-Builder under this Agreement exceeding the aggregate limit of liability under Section 9.3(d);

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- (q) a failure by the Design-Builder to pay to the Province when due and payable any amount that is due and payable by the Design-Builder to the Province under this Agreement, and such payment is not the subject of an unresolved dispute pursuant to the Dispute Resolution Procedure, and such failure is not remedied within 20 Business Days after the date notice that such payment is overdue is given by the Province to the Design-Builder;
- (r) the provision, performance or carrying out of the Project Work or any part of the Project Work without a Permit required in connection with such Project Work or in breach of the terms of any Permit required in connection with such Project Work and the failure to have the relevant Permit or such breach is not remedied within 30 Business Days after the date notice of such failure or breach is given by the Province to the Design-Builder or, if a longer period of time is reasonably required to remedy such failure or breach, within such longer period of time so long as the Design-Builder has commenced remedying such failure or breach within such 30 Business Days and proceeds to remedy it with all due diligence and continuity to completion; and
- (s) a failure by the Design-Builder to perform or observe any of its material obligations under this Agreement or any of the other Province Project Documents that is not referred to in any of the other paragraphs of this Section 12.1, and without regard to whether or not the Design-Builder has received or receives NCE Points or Default Points under this Agreement for or as a result of such failure, and such failure is not remedied within 30 Business Days after the date notice of such failure is given by the Province to the Design-Builder.

Each notice that may be given to the Design-Builder referred to in any of Sections 12.1(c), (g), (h), (i), (j), (m), (q), (r) and (s) shall specify in reasonable detail according to the information then reasonably available to the Province the failure, breach, occurrence or other matter in respect of which the notice is given, and shall state clearly that the notice is given under this Section 12.1 and could lead to a Design-Builder Default and to termination of this Agreement.

12.2 Notice of Default by Design-Builder

The Design-Builder shall notify the Province of the occurrence, and details, of any Design-Builder Default and of any event or circumstance that has occurred and may or would, with the passage of time or otherwise, constitute or give rise to a Design-Builder Default, in any case promptly upon the Design-Builder becoming aware of such occurrence.

12.3 Remedies of the Province for Design-Builder Default

If and whenever a Design-Builder Default occurs and is continuing, the Province may, at its option and without prejudice to any of its other rights or remedies or to any rights or action which accrue or shall already have accrued to the Province under this Agreement or otherwise at law or in equity, exercise any or all of the following rights and remedies as the Province, in its discretion, shall determine:

- (a) if the Design-Builder Default is one referred to in any of Sections 12.1(a), (b), (c), (d), (e), (g), (h), (i), (j), (m), (n), (o), (p) or (r), the Province may terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];
- (b) if the Design-Builder Default is one referred to in Section 12.1(f), the Province may:

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- (i) where the breach is occasioned by the Design-Builder or by an employee of the Design-Builder who is not acting independently of the Design-Builder or by any person duly authorized to act for and on behalf of the Design-Builder, terminate this Agreement in its entirety by notice having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];
 - (ii) where the breach is occasioned by an employee of the Design-Builder who is acting independently of the Design-Builder, then unless the Design-Builder causes the termination of such employee's employment within 30 days after the earlier of the Design-Builder becoming aware of the breach and notification to the Design-Builder of the breach and (if considered by the Design-Builder, acting reasonably, to be necessary) employs a replacement to perform such terminated employee's functions within such 30 day period, terminate this Agreement in its entirety by notice having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];
 - (iii) where the breach is occasioned by any person other than as referred to above in Sections 12.3(b)(i) or 12.3(b)(ii), and whether or not any benefit to the Design-Builder or the employer of the person occasioning the breach was intended, then unless the Design-Builder causes the termination of the employment of such person (and, in the case of a person other than a person employed by the Design-Builder, the termination of the engagement or employment of that person's employer) within 30 days after the earlier of the Design-Builder becoming aware of the breach and notification to the Design-Builder of the breach or such longer period as the Province may in its discretion by notice permit, terminate this Agreement in its entirety by further notice given after the end of such 30 day period, such further notice having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];
- (c) if the Design-Builder Default is one referred to in Section 12.1(k) or Section 12.1(l):
- (i) the Province may in its discretion, and without prejudice to its rights under Section 12.3(c)(ii), after advising the Design-Builder of the Province's intention to do so, remedy the Design-Builder Default or engage one or more third parties to do so, and in connection therewith the Province may take or cause to be taken all such steps and actions as may be reasonably required to remedy the Design-Builder Default (but this shall not obligate the Province to (A) remedy or to attempt to remedy a Design-Builder Default or (B) after having commenced to remedy or to attempt to remedy a Design-Builder Default, to continue to do so), and the Design-Builder shall pay to the Province on demand all costs and expenses incurred by the Province in remedying or attempting to remedy such Design-Builder Default, together with an administrative fee equal to fifteen percent (15%) of such costs and expenses, provided that no such action by the Province shall be deemed to be a termination of this Agreement or relieve the Design-Builder from any of its obligations under this Agreement (except to the extent any such obligation is fully performed by the Province); and
 - (ii) if the Design-Builder Default is not remedied within 20 Business Days after notice of such Design-Builder Default is given by the Province to the Design-

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Builder, the Province may terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];

- (d) if the Design-Builder Default is one referred to in Section 12.1(q), and provided that the aggregate amount of:
 - (i) the sum that is the subject of that the Design-Builder Default; and
 - (ii) all other sums that:
 - (A) are due and payable and remain unpaid by the Design-Builder to the Province;
 - (B) are not the subject of an unresolved dispute pursuant to the Dispute Resolution Procedure; and
 - (C) have each been outstanding and unpaid by the Design-Builder to the Province for more than 20 Business Days after the date a notice of non-payment thereof was given by the Province to the Design-Builder under Section 12.1(t);

exceeds \$250,000, the Province may give further notice to the Design-Builder of such aggregate amount and the non-payment thereof requiring the Design-Builder to pay such aggregate amount within 10 Business Days after the date such further notice is given by the Province to the Design-Builder, and if such aggregate amount is not paid by the Design-Builder within such 10 Business Days, then the Province may terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute];

- (e) if the Design-Builder Default is one referred to in Section 12.1(s), the Province may give notice to the Design-Builder of the Design-Builder Default requiring the Design-Builder at the option of the Design-Builder either:
 - (i) to remedy the Design-Builder Default referred to in that notice within 20 Business Days after the date such notice is given by the Province to the Design-Builder; or
 - (ii) to submit to the Province's Representative pursuant to the Review Procedure, within 20 Business Days after the date such notice is given by the Province to the Design-Builder, a reasonable schedule and plan for the remedying of such Design-Builder Default specifying in reasonable detail the manner and latest date by which such Design-Builder Default will be remedied;

and in either case Section 12.4 [Termination for Failure to Remedy According to Program] shall apply; and

- (f) except as otherwise expressly provided in this Agreement or any of the other Province Project Documents, and subject to Schedule 16 [Dispute Resolution Procedure], the

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Province may exercise any of its other rights and remedies, whether under this Agreement or any of the other Province Project Documents, or at law or in equity.

12.4 Termination for Failure to Remedy According to Program

If the Province gives notice to the Design-Builder of a Design-Builder Default pursuant to Section 12.3(e), and if the Design-Builder Default referred to in that notice is not remedied:

- (a) according to a schedule and plan that the Design-Builder submits to the Province's Representative pursuant to the Review Procedure in accordance with Section 12.3(e)(ii) and to which the Province has no objection under the Review Procedure; or
- (b) except where Section 12.4(a) applies, before the expiry of the period referred to in Section 12.3(e)(i),

then, in any such event, the Province may at its option, and without prejudice to any of its other rights or remedies and to any rights of action which accrue or shall already have accrued to the Province, terminate this Agreement by notice to the Design-Builder having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute].

12.5 Province Costs

Without limiting, but without duplicating, any other amounts the Design-Builder is obligated under this Agreement to pay to the Province or BCTFA on account of costs and expenses incurred by the Province, the Design-Builder shall pay to the Province and BCTFA on demand all costs and expenses incurred by the Province and BCTFA or either of them in exercising any rights and remedies as a result of a Design-Builder Default that would not have been incurred but for the Design-Builder Default, including any relevant increased administrative costs and expenses and legal and other professional advisor expenses.

12.6 Province Remedies Cumulative

Except as otherwise expressly provided in this Agreement or any of the other Province Project Documents:

- (a) all rights and remedies of the Province under this Agreement and the other Province Project Documents are cumulative and are in addition to and not in substitution for or to the exclusion of any other rights and remedies available to the Province under this Agreement or any of the other Province Project Documents or at law or in equity; and
- (b) the Province may have recourse to any one or more or all of such rights and remedies, concurrently or successively, as it shall see fit, without prejudice to any of its other available rights and remedies.

12.7 Continued Effect

Notwithstanding any Design-Builder Default, the Province may continue to treat this Agreement as being in full force and effect and to enforce its rights under this Agreement, without prejudice to any other rights and remedies of the Province in relation to such Design-Builder Default including the right to terminate this Agreement as provided herein.

12.8 Compensation on Termination

In the event of an effective termination of this Agreement pursuant to Section 12.3(a), 12.3(c)(ii), 12.3(d) or Section 12.4 [Termination for Failure to Remedy According to Program], compensation on termination shall be payable in accordance with Part 2 [Compensation on Termination for Design-Builder Default] of Schedule 13.

PART 13 PROVINCE DEFAULT AND DESIGN-BUILDER REMEDIES

13.1 Province Default

Each occurrence of any one or more of the following events or circumstances shall constitute a **“Province Default”**:

- (a) a failure by the Province to pay to the Design-Builder when due and payable any amount that is due and payable by the Province to the Design-Builder under this Agreement, and such payment is not the subject of an unresolved dispute pursuant to the Dispute Resolution Procedure, and such failure is not remedied within 20 Business Days after the date notice that such payment is overdue is given by the Design-Builder to the Province;
- (b) a failure by the Province to comply with the requirements or directive of a final award (after all rights of further appeal have been exhausted or have expired) in a matter dealt with in accordance with the Dispute Resolution Procedure and such failure to comply is not remedied within 20 Business Days after the date notice of such non-compliance is given by the Design-Builder to the Province, or, if a longer period of time is reasonably required to comply, within such longer period of time as is reasonably required to comply so long as the Province has commenced to comply within such 20 Business Days and proceeds with such compliance with all due diligence and continuity to completion;
- (c) any breach by the Province of the provisions of Section 16.2 [Assignment by the Province];
- (d) any person to whom the interests of the Province or BCTFA under this Agreement or any other Province Project Document are transferred in accordance with Section 16.2 [Assignment by the Province] ceases to be a Qualified Governmental Entity;
- (e) except where such failure constitutes a Compensation Event, a failure by the Province to perform or observe any of its material obligations under this Agreement or any of the other Province Project Documents, and such failure continues so as to substantially frustrate the performance of, or render it impossible for the Design-Builder to perform, the Design-Builder’s material obligations under this Agreement for a continuous period of not less than 60 days after notice of such failure is first given by the Design-Builder to the Province, and such continuing failure is still not remedied within 30 days after further notice of such failure is given by the Design-Builder to the Province after the expiration of such 60 days;
- (f) except where such expropriation, sequestration, requisition or seizure constitutes or results in a Compensation Event referred to in paragraph (a) of the definition of Compensation Event in Section 1.1 [Definitions] of Schedule 1, any expropriation,

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sequestration, requisition or other seizure by the Province or any agent, crown corporation, ministry or department of the Province, of the Project Site or any material part thereof, other than in the exercise of rights or obligations set out in, or expressly contemplated by, this Agreement, and such action substantially frustrates the performance of, or renders it impossible for the Design-Builder to perform, the Design-Builder's material obligations under this Agreement for a continuous period of not less than 60 days after the date notice of such action is first given by the Design-Builder to the Province, and such matter is still not remedied within 30 days after further notice of such matter is given by the Design-Builder to the Province after the expiration of such 60 days; and

- (g) any representation or warranty made by the Province in Section 3.2 [Representations and Warranties of the Province] being incorrect in any material respect when made and the incorrectness of the fact or facts misrepresented has or might reasonably be expected to have a material adverse effect on the ability of the Design-Builder or the Province to perform their respective obligations, or the ability of the Design-Builder to exercise any of its rights, under this Agreement or any of the other Province Project Documents, except where such incorrect representation or warranty or the relevant material adverse effect is capable of being remedied and is in fact remedied within 60 Business Days after the date notice of such incorrect representation or warranty is given by the Design-Builder to the Province.

Each notice that may be given to the Province referred to in any of Sections 13.1(a), (b), (e), (f) and (g) shall be given to the Province's Representative, shall specify in reasonable detail, according to the information reasonably available to the Design-Builder, the failure, breach, occurrence or other matter in respect of which the notice is given, and shall state clearly that the notice is given under this Section 13.1 and could lead to a Province Default and to termination of this Agreement.

13.2 Notice of Default by Province

The Province shall notify the Design-Builder of the occurrence, and details, of any Province Default and of any event or circumstance that has occurred and may or would, with the passage of time or otherwise, constitute or give rise to a Province Default, in either case promptly upon the Province becoming aware of such occurrence.

13.3 Remedies of Design-Builder for Province Default

If and whenever a Province Default occurs and is continuing, the Design-Builder may, at its option and without prejudice to any of its other rights or remedies and to any rights or action which accrue or shall already have accrued to the Design-Builder, exercise any or all of the following rights and remedies as the Design-Builder, in its sole discretion, shall determine:

- (a) the Design-Builder may terminate this Agreement by notice to the Province having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute], if the Province Default is one referred to in Section 13.1(a) and the aggregate amount of:
 - (i) the sum that is the subject of that Province Default; and
 - (ii) all other sums that:

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- (A) are due and payable and remain unpaid by the Province to the Design-Builder;
- (B) are not the subject of an unresolved dispute pursuant to the Dispute Resolution Procedure; and
- (C) have each been outstanding and unpaid by the Province to the Design-Builder for more than 45 Business Days after the date a notice of non-payment thereof was given by the Design-Builder to the Province under Section 13.1(a);

exceeds \$250,000, and such aggregate amount is not paid by the Province to the Design-Builder within 20 Business Days following written notice given by the Design-Builder to the Province of such aggregate amount and the non-payment thereof;

- (b) if the Province Default is one referred to in any of Sections 13.1(b), (c), (d), (e), (f) or (g), the Design-Builder may terminate this Agreement by notice to the Province having immediate effect, subject to Section 14.4 [Notice of Intention to Terminate and Dispute]; and
- (c) except as otherwise expressly provided in this Agreement (including in Section 9.8 [Limitation of Province Liability]) or any of the other Province Project Documents, and subject to Section 1.4 [No Fettering of Province's Rights, Powers and] and Schedule 16 [Dispute Resolution Procedure], the Design-Builder may exercise any of its other rights and remedies, whether under this Agreement or any of the other Province Project Documents, or at law or in equity.

13.4 Design-Builder Costs

Without limiting, but without duplicating, any other amounts the Province is obligated under this Agreement to pay to the Design-Builder on account of costs and expenses incurred by the Design-Builder, and except to the extent the Design-Builder is compensated for such costs and expenses in compensation paid or payable under Schedule 13 [Compensation on Termination], the Province shall pay to the Design-Builder on demand all costs and expenses incurred by the Design-Builder in exercising any rights and remedies as a result of a Province Default that would not have been incurred but for the Province Default, including any relevant increased administrative costs and expenses and legal and other professional advisor expenses.

13.5 Design-Builder Remedies Cumulative

Except as otherwise expressly provided in this Agreement or any of the other Province Project Documents:

- (a) all rights and remedies of the Design-Builder under this Agreement and the other Province Project Documents are cumulative and in addition to and not in substitution for or to the exclusion of any other rights and remedies available to the Design-Builder under this Agreement or any of the other Province Project Documents or at law or in equity; and

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- (b) the Design-Builder may have recourse to any one or more or all of such rights and remedies, concurrently or successively, as it shall see fit, without prejudice to any of its other available rights and remedies.

13.6 Continued Effect

Notwithstanding any Province Default, the Design-Builder may continue to treat this Agreement as being in full force and effect and to enforce its rights under this Agreement, without prejudice to any other rights and remedies of the Design-Builder in relation to such Province Default including the right to terminate this Agreement as provided herein.

13.7 Compensation on Termination

In the event of an effective termination of this Agreement pursuant to Section 13.3(a) or Section 13.3(b), compensation on termination shall be payable in accordance with Part 1 [Compensation on Termination other than for Design-Builder Default] of Schedule 13.

PART 14 TERMINATION

14.1 Termination for Convenience

- (a) The Province may in its discretion and for any reason whatsoever terminate this Agreement at any time by giving to the Design-Builder at least 90 days' prior notice of the effective date of such termination, and on such effective date this Agreement shall terminate.
- (b) In the event of notice being given by the Province in accordance with Section 14.1(a), from and after the giving of such notice and during the notice period thereunder the Design-Builder shall only proceed with or continue, or allow or permit third parties to proceed with or continue, those portions of the Project Work that are specifically authorized in writing by the Province during the notice period.
- (c) In the event of any termination pursuant to Section 14.1(a), compensation on termination shall be payable in accordance with Part 1 [Compensation on Termination other than for Design-Builder Default] of Schedule 13.

14.2 No Other Rights of Termination

Notwithstanding Sections 12.3(f), 12.6 [Province Remedies Cumulative], 13.3(c) and 13.5 [Design-Builder Remedies Cumulative], and without prejudice to their respective rights of termination expressly set out in this Agreement, each of the Province and the Design-Builder waives and agrees not to exercise any common law or equitable right or remedy it may have prior to the end of the Term to terminate, repudiate, rescind or otherwise bring to an end this Agreement as a consequence of any breach, failure or default by another party hereunder.

14.3 Continued Performance

Subject to any exercise by the Province of its rights under Part 11 [Province's Access, Monitoring and Step-In Rights] and subject to Section 14.1(b), and unless otherwise directed by the

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Province with respect to obligations of the Design-Builder, the parties shall continue to perform their respective obligations under this Agreement, notwithstanding the giving of any notice of default, Notice of Intention to Terminate or notice of termination, until the termination of this Agreement becomes effective in accordance with the terms of this Agreement.

14.4 Notice of Intention to Terminate and Dispute

Except in the case of a termination pursuant to Section 14.1 [Termination for Convenience]:

- (a) if either the Province or the Design-Builder wishes to terminate this Agreement pursuant to a right of termination that it believes it is entitled to exercise under the terms of this Agreement, such party (in this Section 14.4, the “**Terminating Party**”) must by notice (a “**Notice of Intention to Terminate**”) to the other of them (in this Section 14.4, the “**Terminated Party**”) to be given before or at the time notice of termination is given, specify the right to terminate that the Terminating Party intends to exercise and the event, circumstance or default giving rise to such right or obligation to terminate;
- (b) if the Terminated Party wishes to dispute the right to terminate (or the existence or occurrence of the event, circumstance or default giving rise to such right to terminate), as set out in a Notice of Intention to Terminate, the Terminated Party must, within 20 Business Days after receiving the Notice of Intention to Terminate, either:
 - (i) refer the dispute to the Dispute Resolution Procedure, in which event the dispute shall be resolved by agreement of the parties or, failing such agreement, through the Dispute Resolution Procedure and such termination shall take effect:
 - (A) when it is agreed by the parties or finally determined by the Dispute Resolution Procedure that the exercise of the right to terminate is or would be valid in accordance with this Agreement; or
 - (B) when notice of termination pursuant to that right to terminate is actually given;whichever is later; or
 - (ii) apply to Court for declaratory relief in respect of the purported right to terminate and/or refer to the Court the question of whether or not the exercise of the right to terminate is or would be valid in accordance with this Agreement, in which event the dispute shall be resolved by agreement of the parties or, failing such agreement, by the Court, and such termination shall take effect:
 - (A) when it is agreed by the parties or finally determined by the Court (without further rights of appeal) that the exercise of the right to terminate is or would be valid in accordance with this Agreement; or
 - (B) when notice of termination pursuant to that right to terminate is actually given;whichever is later;

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- (c) if, within 20 Business Days after receiving the Notice of Intention to Terminate, the Terminated Party neither refers the matter to the Dispute Resolution Procedure nor applies to Court as provided in Section 14.4(b), the Terminating Party shall have a valid right to terminate this Agreement, and the Terminated Party shall have no further right to dispute or challenge or seek recourse in respect of the validity of such right to terminate, and termination pursuant to that right to terminate shall take effect:
 - (i) on the expiration of such 20 Business Days; or
 - (ii) when notice of termination pursuant to that right to terminate is actually given;whichever is later; and
- (d) the parties agree to conduct expeditiously any proceedings under Section 14.4(b)(i) or Section 14.4(b)(ii), as applicable.

14.5 Changes after Notice of Termination

If either the Province or the Design-Builder gives a Notice of Intention to Terminate or a notice of termination, the Design-Builder shall not, and shall cause the Subcontractors not to, without the prior written consent of the Province (which consent may not be unreasonably withheld or delayed):

- (a) materially amend or offer, promise or agree for the future materially to amend the terms and conditions of employment of any employee employed by the Design-Builder or any of the Subcontractors whose work (or any part of it) is work undertaken for the purposes of the Project;
- (b) materially increase or make offers of employment so as materially to increase the number of employees referred to in Section 14.5(a);
- (c) do or omit to do any other thing in relation to employees referred to in Section 14.5(a) that would or might reasonably be expected to increase any Employee Termination Payments and/or Material Subcontractor Breakage Costs included in any compensation on termination payable by the Province in connection with the termination of this Agreement;
- (d) cancel or terminate, or materially amend the terms and conditions of, any agreements or arrangements for the acquisition or supply of Plant for the purposes of the Project Work;
- (e) materially alter the volumes or quantities of Plant ordered for the purposes of the Project Work; or
- (f) enter into any new agreements or arrangements for the acquisition or supply of Plant for the purposes of the Project Work except at reasonable arm's length market rates and on reasonable arm's length market terms and conditions.

14.6 Effect of Termination or Expiry Generally

If for any reason this Agreement is terminated or the Term expires:

- (a) the rights of access granted to the Design-Builder pursuant to Section 2.5 [Access to and Responsibility for Project Site] shall terminate on the Termination Date and the Design-Builder shall cease to have any further rights under Section 2.5 [Access to and Responsibility for Project Site] and Schedule 8 [Lands] with respect to the Project Site and the Project Infrastructure, except to the extent necessary to enable the Design-Builder to perform any obligations of the Design-Builder under this Agreement required to be performed in consequence of or following such termination or expiry;
- (b) after the Termination Date, the Design-Builder shall not have any further right to provide, perform or carry out any further Project Work, but this shall not relieve or release the Design-Builder from any of its obligations under this Agreement or any other Province Project Documents including obligations that, by their terms or by necessary implication, are intended to survive termination or to give effect to termination or expiry or to the consequences thereof, or are consequential upon termination or expiry;
- (c) the Province and the Design-Builder shall reconcile between them any amounts due or accruing due under this Agreement and the other Province Project Documents from one party to the other as at the Termination Date, including:
 - (i) any outstanding Province Payments, Performance Incentive Payments and Non-Compliance Event Payments that are due; and
 - (ii) the uncalled balance of any deposits and security provided by the Design-Builder under Permits assigned under Section 14.8(a)(viii) remaining as at the date of assignment, to the extent not replaced by the Province and returned to the Design-Builder,and any net balance owing shall be adjusted in the compensation payable on termination as provided in Section 3.2 [Adjustment for Net Balance] and Section 3.3 [Rights of Set Off] of Schedule 13, or paid by the relevant party to the other in the case of expiry;
- (d) subject to Sections 14.6(a), (b) and (c), and Section 3.4 [Full and Final Settlement] of Schedule 13, such termination or expiry shall be without prejudice to all the rights, remedies and obligations of the parties under this Agreement with respect to:
 - (i) any event, occurrence, circumstance, act or omission arising or existing before the effective time of termination or expiry;
 - (ii) any breach of this Agreement, Province Default or the Design-Builder Default occurring prior to the effective time of termination or expiry;
 - (iii) provisions of this Agreement that are to be observed and performed under this Agreement up to the effective time of termination or expiry; and
 - (iv) provisions of this Agreement that, by their terms or by necessary implication, are intended to survive termination or expiry or to give effect to termination or

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expiry or to the consequences thereof, or are consequential upon termination or expiry;

and such rights, remedies and obligations shall continue following termination or expiry, subject to Sections 14.6(a), (b) and (c) and subject to Section 3.4 [Full and Final Settlement] of Schedule 13; and

- (e) except as provided above in this Section 14.6, all rights and obligations of the parties under this Agreement shall cease and be of no further force or effect.

14.7 Province Discretion to Complete

If for any reason this Agreement is terminated before the end of the Term, then notwithstanding any duty of the Province to mitigate its Losses:

- (a) whether or not the Project Work is continued by the Province or any other person;
- (b) whether or not the Project Facilities are operated or attempts to do so are made or discontinued;
- (c) what use, if any, is made of any Project Work performed prior to the Termination Date; and
- (d) whether or not any Project Work performed prior to the Termination Date is altered or removed;

shall be in the discretion of the Province, and the Design-Builder shall have no claim against the Province with respect thereto.

14.8 Transfer of Assets

- (a) Without limiting the provisions of Section 18.7 [Further Assurances], within 30 days after the Termination Date the Design-Builder shall, at no cost to the Province and in all cases free from Encumbrances (provided that the Province shall have the right, but shall not be obligated, to pay off any and all such Encumbrances in which event any amounts so paid shall immediately be due and owing by the Design-Builder to the Province and shall be payable by the Design-Builder to the Province forthwith on demand or, at the option of the Province, shall be adjusted as provided in Section 14.6(c)), and in each case to the extent not previously transferred, assigned or delivered, as the case may be or caused to be transferred, assigned or delivered by the Design-Builder in accordance with the terms of this Agreement:
 - (i) if and to the extent the Province so elects, confirm by bill of sale or other document requested by the Province the transfer to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province, of title to and ownership of all Plant title to which has passed or is intended to be passed to the Province or to BCTFA or a third party designated by the Province on or before the Termination Date in accordance with Section 2.12 [Transfer of Title].

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- (ii) deliver to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province possession of all Plant referred to in Section 14.8(a)(i) to the extent it is not then affixed to and part of or incorporated into the Project Infrastructure;
- (iii) cause the benefit of all manufacturers' and third party warranties in respect of Project Work, Project Infrastructure, and any other assets that are required to be transferred to the Province in accordance with this Agreement, to be transferred and assigned to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province;
- (iv) quit claim in favour of the Province, or, at the direction of the Province, in favour of BCTFA or a third party designated by the Province, any interest of the Design-Builder in the Project Infrastructure or any other improvements from time to time on, to or forming part of the Project Site;
- (v) deliver to the Province, or, at the direction of the Province, to BCTFA or a third party designated by the Province, the Construction Records, including "as built drawings" showing all alterations made since the commencement of the Project Work to or for the Project Site and the Project Infrastructure;
- (vi) deliver to the Province, or, at the direction of the Province, to BCTFA or a third party designated by the Province, operation and maintenance manuals for the Project Infrastructure (as the same has been constructed, installed, altered, upgraded and augmented by the carrying out of the Project Work) and any other assets transferred or to be transferred to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province, including in respect of communications, signalling and other systems completed and/or in service at the Termination Date;
- (vii) deliver to the Province, or, at the direction of the Province, to BCTFA or a third party designated by the Province, where applicable in accordance with Section 1.5 [Procedure on Termination] of Schedule 17:
 - (A) the Records;
 - (B) all Province Provided Materials;
 - (C) all Modifications to Province Provided Materials; and
 - (D) copies of all Project Intellectual Property,in any such case, in any stage of completion or development, in such electronic or other format as the Province may reasonably require;
- (viii) if and to the extent the Province so elects, and to the extent permitted by Laws, assign or cause to be assigned all Permits to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province;

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- (ix) return to the Province all Confidential Information of the Province or BCTFA within the possession or control of the Design-Builder or any Subcontractor; and
 - (x) remove all signs identifying itself and (except as otherwise directed by the Province) the Subcontractors as contractors and subcontractors in connection with the Project Work and the Project Facilities.
- (b) Without prejudice to any of the other provisions of this Agreement that require earlier transfer of any of the same, following the Termination Date the Design-Builder shall, at its own cost, transfer to the Province, or, at the direction of the Province, to BCTFA or a third party designated by the Province, title to and possession of (to the extent not referred to in Section 14.8(a)), all documents, manuals, records and information reasonably required to enable the Province to carry out and perform, or procure the carrying out and performance of, the work that would, but for termination of this Agreement, have constituted the Project Work, to the extent that title thereto is not owned by or title to or possession thereof has not previously been transferred to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province in accordance with the terms of this Agreement.
- (c) Following the Termination Date, to the extent the Province so elects, the Design-Builder shall take all steps required by the Province to ensure:
- (i) that all Construction Plant that is being used exclusively for the purposes of any Construction then in progress will remain available for the purpose of completing the relevant Construction, subject, except as otherwise provided herein, to payment therefor by the Province of a reasonable rental charge; and
 - (ii) compliance by the Design-Builder with its obligations under Section 3.1(e) of Schedule 8 [Lands].
- (d) Within 30 days after the Termination Date, the Design-Builder shall, and shall cause its Subcontractors to, offer to sell to the Province or, at the direction of the Province, to BCTFA or a third party designated by the Province, which offer shall remain open for acceptance for at least 30 days after the date such offer is made, at a fair market value (determined as between a willing seller and a willing buyer with any disputes as to such fair market value being determined pursuant to the Dispute Resolution Procedure) and free from any Encumbrances, all or any part of the stocks of material, spare parts and Plant owned by the Design-Builder or any of its Subcontractors, that is being used or is intended to be used exclusively for the purposes of Project Work (other than Construction) and is not otherwise transferred or to be transferred to or at the direction of the Province pursuant to any other provision of this Agreement.

The Design-Builder shall ensure in the case of all Permits and Subcontracts to which the Design-Builder is a party, and shall use all reasonable efforts to ensure in the case of Subcontracts to which the Design-Builder is not a party, that provisions are included to ensure that the Province will be in a position to exercise its rights and the Design-Builder will be in a position to comply with its obligations under this Section 14.8 without additional payment or compensation to any person except as expressly contemplated by this Section 14.8.

14.9 Handover

If for any reason this Agreement is terminated or the Term expires, the following provisions shall apply in respect of the handover of the Project Site and the Project Infrastructure:

- (a) the Design-Builder shall, for a period not exceeding one year after the Termination Date, cooperate fully with the Province and any successor contractor or operator of or with respect to the Project Site, the Project Infrastructure or the Project Work or any part thereof in order to achieve a smooth and orderly transfer of the Project Work and any work in the nature of the Project Work as a going concern and so as to protect the integrity of the Project Infrastructure and so as to protect the safety of, and avoid undue delay or inconvenience to, members of the public;
- (b) the Design-Builder shall as soon as practicable after notice from the Province to do so remove from the Project Site and the Project Infrastructure all materials, plant, machinery, equipment, apparatus, temporary buildings, road vehicles, spare parts and other property owned or leased by the Design-Builder or any person for whom the Design-Builder is in law responsible (including Plant and Construction Plant), other than that:
 - (i) title to which has passed to the Province, BCTFA or a third party designated by the Province under Section 2.12 [Transfer of Title]; or
 - (ii) required to be transferred, delivered, provided, sold or rented to or at the direction of the Province pursuant to Section 14.8 [Transfer of Assets];

and, if the Design-Builder has not done so within 30 days after any notice from the Province requiring it to do so, the Province may (without being responsible for any Loss) remove and sell any such property and shall hold any proceeds less all costs incurred to the credit of the Design-Builder;

- (c) the Design-Builder shall provide all information concerning the Project, the Project Infrastructure and the Project Work reasonably requested by the Province and not otherwise required to be provided by the Design-Builder pursuant to other provisions of this Agreement to the Province and any successor contractor or operator of the Project Site and/or the Project Infrastructure (or any part of either thereof) and provide any necessary training in relation to the communications, signalling and other systems and equipment in service at the Termination Date, as shall reasonably be required for the efficient transfer of responsibility for Operation and Maintenance;
- (d) the Design-Builder shall, not later than the Termination Date, deliver to the Province:
 - (i) keys to all traffic sign housings;
 - (ii) lifting keys for all types of chamber covers;
 - (iii) all keys and pass cards used by the Design-Builder to gain access to the Project Site or any Project Infrastructure, including all buildings forming part of the Project Infrastructure;

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- (iv) codes and passwords to all computers and computerized systems, control of which is required to be transferred to the Province or its designee pursuant hereto; and
- (e) the Design-Builder shall as soon as practicable vacate and hand over to the Province, and leave in a safe and orderly condition, any parts of the Project Site in respect of which either the Access Period has commenced but not otherwise terminated or expired (or in respect of which access has been made available to the Design-Builder pursuant to Section 2.5(c) or the Design-Builder otherwise has access, in either case at the Termination Date) and the Project Infrastructure located on any such parts of the Project Site, including any communications, signalling and other systems and equipment completed and/or in service as at the Termination Date.

**PART 15
CONFIDENTIALITY AND INTELLECTUAL PROPERTY**

15.1 Confidentiality

- (a) Each party agrees, for itself and its respective directors, officers, employees and agents, to keep confidential and not to disclose to any person any Confidential Information received from another party, other than as expressly provided in Section 15.1(b) or as otherwise expressly provided in this Agreement.
- (b) Notwithstanding Section 15.1(a), a party may disclose the whole or any part of the Confidential Information in any of the following circumstances:
 - (i) in the case of any party:
 - (A) to its and its Affiliate's directors, officers, employees, contractors, subcontractors, agents and professional advisors, including, in the case of the Design-Builder and Subcontractors, to the extent necessary to enable it to perform (or to cause to be performed) or to protect or enforce any of its rights or obligations under this Agreement or any of the other Project Documents, provided that the party has first obtained from such person or entity to whom the disclosure is to be made an undertaking of strict confidentiality in relation to the relevant Confidential Information;
 - (B) when required to do so by Laws (including FOIPPA) or by or pursuant to the rules or any order having the force of law of any Governmental Authority or by or pursuant to the rules or any order of any recognized public stock exchange;
 - (C) to the extent that the Confidential Information has, except as a result of any disclosure prohibited by this Agreement, become publicly available or generally known to the public at the time of such disclosure;
 - (D) to the extent that the Confidential Information is already lawfully in the possession of the recipient or lawfully known to the recipient prior to such disclosure;

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- (E) to the extent that it has acquired the Confidential Information from a third party who is not in breach of any obligation as to confidentiality to any other party to this Agreement;
 - (F) to any assignee or proposed assignee permitted under Part 16 [Assignment, Change in Ownership and Subcontracting];
 - (G) the disclosure of which is expressly permitted or required by this Agreement; or
 - (H) the disclosure of which is necessary for the enforcement of this Agreement;
- (ii) in the case of the Province and BCTFA:
- (A) to the extent required for the design, construction, completion, commissioning, testing, operation, maintenance, rehabilitation or improvement of the Project Infrastructure and the Project Site, or the carrying out of any statutory, public or other powers, authorities, discretions, duties or functions in respect of the Project Infrastructure and the Project Site, and including with respect to the contemplation, procurement or undertaking of any such activities by any third parties (including any other Governmental Authority);
 - (B) in relation to the outcome of the procurement process for the Project as may be required to be published;
 - (C) to any minister, ministry, office or agency of the Province, including the Auditor General and the Office of the Comptroller General, and their respective directors, officers, employees, and professional advisors, where required for parliamentary, governmental, statutory or judicial purposes;
 - (D) whether or not falling within Section 15.1(b)(ii)(B) or 15.1(b)(ii)(C), to BCTFA, the Ministry or any other Governmental Authority or to Partnerships BC, and their respective directors, officers, employees, and professional advisors;
 - (E) in the exercise of any of the rights granted to the Province by way of license, including under any Complete License; and
 - (F) which is required to be provided to the Owner's Engineer or to the Independent Engineer in order for it to carry out its respective responsibilities in respect of the Project in accordance with this Agreement;
- (c) Without prejudice to any other rights and remedies that another party may have, each of the parties agrees that damages may not be an adequate remedy for a breach of Section 15.1(a) and that each other party shall, in such case, be entitled to the remedies of injunction, specific performance or other equitable relief for any threatened or actual

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breach of Section 15.1(a), subject, in the case of a claim for any such remedy against the Province, to the provisions of the *Crown Proceeding Act* (British Columbia).

15.2 Freedom of Information, Privacy Protection and Security

- (a) The Design-Builder acknowledges that it is aware that FOIPPA applies to this Agreement and to all contractual submissions and other documents and records relating to this Agreement and to the procurement process in respect of the Project and that the Province, the Ministry and BCTFA are required to fully comply with FOIPPA. No action taken or required to be taken by the Province, the Ministry or BCTFA for the purpose of complying with FOIPPA shall be considered a breach of any obligation under this Agreement.
- (b) The Design-Builder, without limiting its obligation to comply with all Laws, shall comply with and cause all of its agents and Subcontractors and the employees of any of them to comply with:
 - (i) the provisions of Schedule 23 [Privacy Protection] in connection with all Personal Information collected or created in the course of performing the Project Work; and
 - (ii) the Security Schedule in connection with all electronic internet-based systems to be provided by the Design-Builder in accordance with this Agreement.

15.3 Ownership of Intellectual Property and License to Province

- (a) Except as expressly set out in this Agreement, including Section 15.3(b), or as may otherwise be agreed to in writing between the Province and the Design-Builder after the date of this Agreement, as between the Province and the Design-Builder:
 - (i) the Design-Builder shall exclusively own, automatically upon its generation or creation, all rights, including Intellectual Property Rights, in and to the Project Intellectual Property; and
 - (ii) the Province shall exclusively own, automatically upon its generation or creation, all rights, including Intellectual Property Rights, in and to the Records, any Province Provided Materials and any Modifications to Province Provided Materials.
- (b) The Design-Builder agrees that, at no cost to the Province, it:
 - (i) hereby irrevocably and unconditionally conveys, transfers and assigns, or shall procure such conveyance, transfer or assignment from any third parties, or for all rights that arise only upon creation agrees that it shall cause to be so conveyed, transferred and assigned, to the Province all right, title and interest in and to the Records and to any Modifications to Province Provided Materials, including all Intellectual Property Rights thereto;
 - (ii) shall provide to the Province, whether during or after the Term, executed waivers in favour of the Province and BCTFA of all moral rights in the Project

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Intellectual Property, the Records and any Modifications to Province Provided Materials from all Persons who generated or created Project Intellectual Property, Records or Modifications to Province Provided Materials, by one or more instruments in writing substantially in the form of the waiver of moral rights included in Schedule 20 [Waiver of Moral Rights];

- (iii) shall provide to the Province upon Substantial Completion and at any time upon request by the Province, whether during or after the Term, (A) copies of all materials comprising the Project Intellectual Property and (B) the Modifications to Province Provided Materials, in the format or formats as requested by the Province. Without limiting the generality of the foregoing, the Design-Builder shall provide the Province with copies of all software and firmware, and all updates made thereto, that are included in or relate to the Project Work or the Project Infrastructure (as the same has been constructed, installed, altered, upgraded and augmented by the carrying out of the Work); and
- (iv) shall provide to the Province upon Substantial Completion and at any other time upon request by the Province the source code (if any) for any Records and Modifications to Province Provided Materials, and shall ensure that the source code (if any) for any Project Intellectual Property, and for any Background IP and Third Party IP necessary or desirable to implement, operate or exploit the Project Intellectual Property, is deposited in escrow or otherwise rendered available to the Province in a manner and on terms acceptable to the Province, acting reasonably.
- (c) Other than any license rights granted to the Province and BCTFA pursuant to Section 15.3(d), the Province and BCTFA will not own any Intellectual Property Rights in the Background IP or the Third Party IP.
- (d) The Design-Builder, at no cost to the Province:
 - (i) hereby unconditionally grants to the Province and BCTFA a Complete License in and to the Project Intellectual Property and the Background IP; and
 - (ii) shall grant, or cause to be granted, to the Province and BCTFA a Complete License in and to the Third Party IP.
- (e) For greater certainty, the provisions of Section 15.3(b)(iv) and the license provisions contained in Section 15.3(d)(ii) do not extend to include any non-specialized third party software, technology or other Intellectual Property that is generally commercially available.
- (f) Nothing in Section 15.3(d) shall give the Province or BCTFA the right to sell, lease, license, sublicense or otherwise transfer, convey or alienate any software included in the Project Intellectual Property, the Background IP or the Third Party IP (whether for commercial consideration or not) to any person, otherwise than as may be necessary or desirable to use the Project Intellectual Property, the Background IP or the Third Party IP for Complete License Purposes.

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- (g) If any Complete License granted under in Section 15.3(d) cannot be validly granted without the consent of a third party, the Design-Builder, at the Design-Builder's expense, shall use its best efforts to obtain such consent and, without limiting any of its other obligations, shall indemnify and hold harmless the Province and each Province Indemnified Person from and against any and all Direct Losses and Claims in any way arising from the Design-Builder's failure to obtain such consent.
- (h) If the Design-Builder is unable to provide any assignments, licenses or waivers required to be provided under this Agreement, the Design-Builder shall, at no additional cost to the Province or BCTFA, replace the portion of the Third Party IP, Background IP or Project Intellectual Property for which the assignment, license or waiver cannot be provided, with an alternative product or technology that meets the Province's requirements.
- (i) Except as otherwise agreed in writing with the Province and BCTFA, the Design-Builder hereby represents, warrants and covenants that:
 - (i) all Project Intellectual Property, Records and all Modifications to Province Provided Materials are and will be original and do not and will not infringe any third party's Intellectual Property Rights;
 - (ii) it owns, or will as necessary acquire, the rights associated with the Project Intellectual Property, the Background IP and the Third Party IP as may be necessary to provide the assignments or grant the licenses to the Province and BCTFA as required by the terms of this Agreement; and
 - (iii) it has obtained or will obtain waivers of moral rights from all persons as necessary to provide the waivers in favour of the Province and BCTFA as required by the terms of this Agreement.
- (j) The Design-Builder hereby irrevocably designates and appoints the Province, BCTFA and their duly authorized ministers, officers and agents as the Design-Builder's agent and attorney-in-fact to act for and on behalf of the Design-Builder to execute, deliver and file any and all documents with the same legal force and effect as if executed by the Design-Builder, provided that:
 - (i) the Province, BCTFA or any such other person shall only be entitled to rely upon such designation and appointment in circumstances where the Province and BCTFA are unable for any reason to secure the execution by the Design-Builder of any document reasonably required for the purpose of giving effect to, or establishing compliance with, the Design-Builder's obligations under this Section 15.3; and
 - (ii) if a dispute as to whether or not the Design-Builder has complied with any such obligation has been referred to the Dispute Resolution Procedure, the Province, BCTFA or any such other person shall only be entitled to rely upon such designation and appointment in relation to such obligations after such dispute has been resolved in favour of the Province and BCTFA.

15.4 License of Intellectual Property to Design-Builder

- (a) The Province hereby grants to the Design-Builder, only during the Term and only for the purpose of carrying out the Project Work and performing all obligations of the Design-Builder under the Project Documents, a non-transferable, non-exclusive, royalty-free limited license (but with no right to grant sub-licenses except to the Subcontractors) to:
 - (i) use and reproduce the Records and any Province Provided Materials, including any Modifications to Province Provided Materials, required by the Design-Builder for any purpose relating to the Project Work or the Project Infrastructure (including, as appropriate and only to the extent that the Province has the right and authority to grant such license, the Disclosed Data), and all Intellectual Property Rights therein;
 - (ii) make Modifications to any Province Provided Materials, including any Modifications to Province Provided Materials, required by the Design-Builder for any purpose relating to the Project Work or the Project Infrastructure (including, as appropriate and only to the extent that the Province has the right and authority to grant such license, the Disclosed Data), and all Intellectual Property Rights therein; and
 - (iii) use all Project Marks designated by the Province for the Project and the Project Infrastructure from time to time, provided that the Design-Builder's use of such Project Marks shall at all times be subject to compliance by the Design-Builder with any and all guidelines provided by the Province to the Design-Builder from time to time in respect of the use thereof.
- (b) Notwithstanding Section 15.4(a), nothing in this Agreement shall be construed as a permission or authorization for the Design-Builder to, and the Design-Builder shall not, copy or make Modifications to any materials, documents or data (including Disclosed Data) or other information owned by third parties without the prior written consent of such third party owner.

15.5 Traffic Data

- (a) Without prejudice to any rights which the Design-Builder may have in the Traffic Data, the Province and BCTFA shall be entitled without further consent from the Design-Builder:
 - (i) to use the Traffic Data for the purposes of exercising rights or carrying out duties under this Agreement or carrying out any statutory, public or other powers, authorities, discretions, duties or functions; and
 - (ii) to incorporate the Traffic Data in any traffic or other statistics prepared by or on behalf of the Province or BCTFA and to publish such statistics or the Traffic Data either generally or to a limited category of persons or otherwise to exploit such statistics or the Traffic Data and whether or not in return for any fee.
- (b) Without prejudice to any rights which the Province and BCTFA may have in the Traffic Data, the Design-Builder shall be entitled without further consent from the Province to

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use the Traffic Data for the purposes of exercising rights or carrying out duties under this Agreement.

15.6 Survival

Notwithstanding any other provision of this Agreement, the provisions of this Part 15 will survive the expiry or any earlier termination of this Agreement.

PART 16 ASSIGNMENT, CHANGE IN OWNERSHIP AND SUBCONTRACTING

16.1 Assignment by Design-Builder

Neither the Design-Builder nor any Partner shall assign, transfer, mortgage, pledge, charge, or create any trust, security interest or other interest in, any interest of the Design-Builder or any Partner in and under any of the following:

- (a) this Agreement;
- (b) any of the other Province Project Documents; or
- (c) any of the Material Subcontracts (or any of the performance securities or guarantees provided thereunder),

or any part thereof, or any benefit therein or thereunder:

- (d) without the prior acceptance of the Province in accordance with the Consent Procedure, which acceptance may be withheld in the Province's discretion;
- (e) unless at the same time, in the same transaction, to the same person and to the same extent, the Design-Builder or such Partner assigns, transfers, mortgages, pledges, charges, or creates a trust, security interest or other interest in its interests in and under each of such documents together, and none of them separately; and
- (f) except in the case of such an assignment, transfer or creation of any trust or other interest by way of security, unless the assignee, transferee or other person taking an interest executes and delivers to the Province an agreement in form and substance satisfactory to the Province acting reasonably whereby such assignee, transferee or other person assumes and agrees with the Province to observe, perform and be bound by, all of the obligations of the Design-Builder or such Partner under such documents and the other Project Documents to which the Design-Builder or such Partner is a party.

16.2 Assignment by the Province and BCTFA

- (a) Subject to Section 16.2(b), the Province and BCTFA may, without the consent of the Design-Builder, assign or transfer any of their respective interest in and under this Agreement and the other Province Project Documents to a Qualified Governmental Entity that executes and delivers to the Design-Builder an agreement in form and substance satisfactory to the Design-Builder acting reasonably whereby such assignee or transferee assumes and agrees to observe, perform and be bound by, all the obligations

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and liabilities of the Province or BCTFA, as the case may be, under this Agreement and the other Province Project Documents that are being transferred.

- (b) Except as provided in Section 16.2(a), neither the Province nor BCTFA shall, without the prior consent of the Design-Builder, which may be withheld in the Design-Builder's discretion, assign or otherwise transfer any of its interest in or under this Agreement and the other Province Project Documents.
- (c) Upon any assignment or transfer in accordance with Section 16.2(a) of any or all of the obligations or liabilities of the Province or BCTFA under this Agreement and the other Province Project Documents to a Qualified Governmental Entity and the execution and delivery of the agreement contemplated in Section 16.2(a), the Province or BCTFA, as the case may be, shall be released from the obligations and liabilities under this Agreement and the other Province Project Documents that are the subject of such assignment or transfer.

16.3 Change in Control of Design-Builder

No Change in Control of the Design-Builder shall be permitted without the prior written consent of the Province in accordance with the Consent Procedure, which consent may be withheld in the Province's discretion, provided that a Change in Control of the Design-Builder arising from any *bona fide* open market transaction effected on a recognized public stock exchange shall not require the Province's consent.

16.4 Use of Subcontractors by Design-Builder

Except as otherwise provided in this Agreement, the Province acknowledges that the Design-Builder may provide, perform and carry out part of the Project Work through one or more Subcontractors. Notwithstanding any such contracting and subcontracting:

- (a) the Design-Builder shall not be relieved or excused from any of its obligations and liabilities under this Agreement; and
- (b) the Design-Builder shall be and remain principally liable to the Province for the observance and performance of all the covenants, agreements, conditions and provisos contained in this Agreement that are by the terms of this Agreement to be observed and performed by the Design-Builder.

16.5 Material Subcontracts

- (a) The Design-Builder shall not enter into:
 - (i) any new Material Subcontract not entered into on or before the Effective Date;
 - (ii) any assignment of a Material Subcontract to a new Material Subcontractor; or
 - (iii) any material change to the scope of work to be performed under any Material Subcontract,

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unless full particulars of the relevant document or proposed course of action have been submitted to the Province's Representative pursuant to the Consent Procedure and have been accepted by the Province, acting reasonably, in accordance with the Consent Procedure.

- (b) The Design-Builder shall deliver to the Province's Representative a conformed copy of each Material Subcontract within 10 Business Days after the date of its execution, and in any case prior to the Material Subcontractor performing any Project Work at the Project Site.

PART 17 DEFECTS

17.1 Risks of Defects

- (a) The Design-Builder shall carry out in accordance with Schedule 5 [Project Work Defects and Warranties], as part of the Project Work, any remedial or other works required as a result of any Project Work Defect, other than any Latent Defect, which Latent Defects shall be remedied in accordance with Section 17.2 [Reporting and Rectification of Latent Defects].
- (b) Except as expressly provided in Section 17.2 [Reporting and Rectification of Latent Defects] or as otherwise expressly provided elsewhere in this Agreement, in respect of any Project Work Defect:
 - (i) any such defect comprising a Nonconformity shall be addressed by the Design-Builder in accordance with Part 6 [Nonconformities] of Schedule 7;
 - (ii) all costs of and associated with such defect and any remedial or other works required as a result of such defect shall be borne by the Design-Builder; and
 - (iii) neither the Province nor BCTFA shall have any liability to the Design-Builder or any of its Subcontractors (whether in contract, tort, by statute or otherwise howsoever and whether or not arising out of any negligent act or negligent omission on the part of the Province or BCTFA or any of their respective employees, agents, contractors or subcontractors of any tier or employees of any of them) in respect of any Loss or Claim arising out of or in connection with the existence of any such defect or any remedial or other works required as a result of any such defect.

17.2 Reporting and Rectification of Latent Defects

- (a) Without prejudice to any other reporting requirement under this Agreement, in the event that a Latent Defect becomes apparent at any time during the Term, the Design-Builder shall promptly and in any event within 10 days of becoming aware of such Latent Defect give notice to the Province's Representative identifying the Latent Defect in reasonable detail.
- (b) Upon the occurrence of either of the following:

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- (i) the Design-Builder notifying the Province of a Latent Defect; or
- (ii) the Province becoming aware of a Latent Defect and notifying the Design-Builder thereof,

the Province shall as soon as reasonably practicable do one of the following in its discretion for each Latent Defect:

- (iii) retain the Design-Builder to complete the rectification of such Latent Defect by initiating a Province Change in respect of such rectification work under Section 7.1 [Province Changes], with the compensation and relief to which the Design-Builder is entitled being determined in accordance with Schedule 11 [Changes], provided that any entitlement which the Design-Builder would have had under Part 8 [Supervening Events] if such Latent Defect had constituted a Compensation Event under Section 17.2(b)(iv), including relief from delays and Direct Losses resulting from the Design-Builder's compliance with its obligations under Section 17.3 [Traffic Management and Public Safety with Defects] in respect of such Latent Defect shall be included in the compensation and relief to which the Design-Builder is entitled for such Province Change; or
- (iv) have such rectification work carried out by its own labour forces (including day labour retained by the Province) or by a Third Party Contractor, in which event the existence of such Latent Defect and the Design-Builder's obligations arising as a result of such Latent Defect, including its resulting obligations as Prime Contractor and its obligations under Section 17.3 [Traffic Management and Public Safety with Defects], as well as the acts and omissions of the Province or such Third Party Contractor, as the case may be, in carrying out such rectification work shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply, except only that, for the purposes of Section 8.1(b)(v) in the case of any Latent Defect, the time period referred to therein shall not apply in respect of any such Compensation Event in respect of such Latent Defect.

17.3 Traffic Management and Public Safety with Defects

For greater certainty, the Design-Builder shall be responsible in accordance with this Agreement for all Traffic Management and other procedures and arrangements for the safety of the public using the Project Infrastructure for which it is otherwise responsible under the terms of this Agreement irrespective of any defect in the Project Infrastructure, including any Project Work Defect or Latent Defect.

PART 18 GENERAL

18.1 Disputes

- (a) Except as otherwise expressly provided in this Agreement:
 - (i) any dispute between the parties with respect to any of the subject matters of this Agreement, whether or not the provisions of this Agreement specifically refer the dispute to the Dispute Resolution Procedure;

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- (ii) any matter or dispute between the parties that, by the express terms of this Agreement, is to be resolved or determined by the Dispute Resolution Procedure; and
- (iii) any disagreement between the parties with respect to any matter that, by the express terms of this Agreement, is to be agreed upon by the parties;

shall be resolved in accordance with, and the parties shall comply with, the Dispute Resolution Procedure, provided that, notwithstanding this or any other provision in this Agreement, no matter, decision or determination which by the terms of this Agreement is subject to or within the discretion of, or is to be made in the discretion of, the Province or the Province's Representative shall be subject to the Dispute Resolution Procedure.

- (b) At all times, notwithstanding the existence of any dispute or the referral of any dispute for resolution under the Dispute Resolution Procedure, except as may otherwise be expressly provided in this Agreement, the parties shall continue to comply with, observe and perform all of their respective obligations (including the obligation of the Design-Builder to proceed with the conduct of the Project Work) in accordance with the provisions of this Agreement without prejudice to the right to contest, dispute and challenge the relevant matter in accordance with the provisions of this Agreement.
- (c) Without limiting any other provision of this Agreement, to the extent that any such dispute involves a disagreement as to the nature or scope of any of the Project Work (including as to the performance or method of performance of any of the Project Work), the Design-Builder shall abide by the decision of the Province with respect to the subject matter of the dispute and diligently proceed with the Project Work, and shall comply with all instructions given by the Province pending the outcome of the dispute, but without prejudice to the rights of the Design-Builder as ultimately determined in accordance with the Dispute Resolution Procedure.
- (d) Any and all issues or disputes between or among the Province, BCTFA and the Design-Builder, whether or not subject to the Dispute Resolution Procedure, shall constitute Confidential Information.

18.2 Public Communications

- (a) The Design-Builder will carry out the Communications and Engagement in accordance with Schedule 9 [Communications and Engagement].
- (b) Unless expressly provided in this Agreement or otherwise required by any Law (but only to that extent), neither party shall make or permit to be made any public announcement or disclosure whether for publication in the press, radio, television or any other medium of any Confidential Information or any matters relating thereto, without the prior written consent of the other party, which consent may be granted or withheld by such other party in its discretion.

18.3 Entire Agreement

This Agreement (including the Schedules) constitutes the entire agreement between the parties with respect to all matters contained herein, expressly superseding all prior agreements and

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communications (both oral and written) between any of the parties with respect to all matters contained herein and superseding as well the Request for Qualifications and the Request for Proposals.

18.4 Amendment

No amendment to this Agreement shall be binding unless it is in writing and signed by each of the parties hereto.

18.5 Notices

Any notice, demand, request, consent, approval, objection, agreement or other communication required or permitted to be given, made or issued under this Agreement must, unless otherwise specifically provided in this Agreement, be in writing signed by the providing party and delivered by hand, sent by a recognized courier service (with delivery receipt requested), or transmitted by facsimile or electronic transmission to the address, facsimile transmission number and/or electronic email address of each party set out below:

- (a) if to the Province:

Ministry of Transportation and Infrastructure
5B – 940 Blanshard Street
Victoria, British Columbia
V8W 3E6
Attention: The Deputy Minister
Facsimile: 250-387-6431

- (b) if to BCTFA:

BC Transportation Financing Authority
c/o Ministry of Transportation and Infrastructure
5B – 940 Blanshard Street
Victoria, British Columbia
V8W 3E6
Attention: The Chief Executive Officer
Facsimile: 250-387-6431

- (c) if to the Province's Representative:

Suite 1450 – 605 Robson Street,
Vancouver, British Columbia
V6B 5J3
Attention: Province's Representative
Email: PROVREP.HWY91_17@gov.bc.ca

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- (d) if to the Design-Builder or the Design-Builder's Representative:

Pacific Gateway Constructors General Partnership
c/o CMI-HWY 91 Limited Partnership
1200, 1067 West Cordova Street
Vancouver, British Columbia
V6C 1C7
Attention: Brad Mytko
Email: Brad.Mytko@ledcor.com
Facsimile: 604-681-5609

with a copy to:

Attention: Stacey Boothman
Email: Stacey.Boothman@ledcor.com

or to such other address, facsimile transmission number or electronic mail address as any party or its representative may, from time to time, designate to the other party and its representatives in the manner set out above. Any such notice or communication shall be considered to have been received:

- (e) if delivered by hand or by a courier service during business hours on a Business Day, when delivered, and if not delivered during business hours, upon the commencement of business hours on the next Business Day;
- (f) if sent by facsimile transmission during business hours on a Business Day, upon the sender receiving confirmation of the successful transmission and, if not transmitted during business hours, upon the commencement of business hours on the next Business Day following confirmation of the transmission; and
- (g) if sent by electronic transmission during business hours on a Business Day, upon receipt, and if not delivered during business hours, upon the commencement of business hours on the next Business Day provided that:
- (i) the receiving party has, by electronic mail or by hand delivery, acknowledged to the notifying party that it has received such notice; or
- (ii) within 24 hours after sending the notice, the notifying party has also delivered a copy of such notice to the receiving party by hand delivery.

18.6 Waiver

Except as expressly provided otherwise in this Agreement, any waiver of any provision of this Agreement shall only be effective if in writing signed by the waiving party, and no failure by any party at any time to exercise a right or remedy under or to enforce any provision of this Agreement or to require performance by any other party of any of the provisions of this Agreement shall be construed as a waiver of any such provision and shall not affect the validity of this Agreement or any part thereof or the right of any party to enforce any provision in accordance with its terms. Any waiver shall only apply to the specific matter waived and only in the specific instance and for the specific purpose for which it is given.

18.7 Further Assurances

The parties shall do, execute and deliver, or shall cause to be done, executed and delivered, all such further acts, documents and things as the other may reasonably request for the purpose of giving effect to this Agreement or for the purpose of establishing compliance with the parties' respective obligations under this Agreement.

18.8 Relationship of the Parties

Nothing contained in this Agreement or in the other Province Project Documents nor any action taken pursuant hereto or thereto shall be deemed to constitute the Province and the Design-Builder, or BCTFA and the Design-Builder, or all of them, a partnership, joint venture or any other similar such entity.

18.9 Binding Effect

Subject to the provisions of Part 16 [Assignment, Change in Ownership and Subcontracting], this Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective successors and permitted assigns.

18.10 Counterparts

This Agreement may be executed in one or more counterparts. Any single counterpart of a set of counterparts executed, in either case, by all of the parties will constitute a full, original and binding agreement for all purposes. Counterparts may be executed either in original or PDF form, provided that any party providing its signature in PDF form shall promptly forward to each other party an original signed copy of this Agreement.

[EXECUTION PAGES FOLLOW]

IN WITNESS WHEREOF the parties hereto have executed this Agreement as of the day and year first above written.

SIGNED on behalf of **HER MAJESTY**)
THE QUEEN IN RIGHT OF THE)
PROVINCE OF BRITISH COLUMBIA)
by a duly authorized representative of)
the **MINISTER OF TRANSPORTATION**)
AND INFRASTRUCTURE in the)
presence of:)



(Witness) **NISHA BATHE**
BARRISTER & SOLICITOR
MINISTRY OF ATTORNEY GENERAL
7th Floor, 1675 Douglas Street
Victoria BC V8W 2G5



Grant Main
Deputy Minister, Ministry of Transportation and
Infrastructure

BC TRANSPORTATION FINANCING AUTHORITY
by its authorized signatory:

Per: 

Grant Main
Chief Executive Officer

**PACIFIC GATEWAY CONSTRUCTORS GENERAL
PARTNERSHIP**, by its partners:

CMI-HWY 91 LIMITED PARTNERSHIP,
by its general partner **CMI-HWY 91 DESIGN BUILD LTD.**,
by its authorized signatories:

Per:



Name: Quentin Huillery
Title: Director

Per:

Name:
Title:

AECON INFRASTRUCTURE MANAGEMENT INC.,
by its authorized signatories:

Per:

Name:
Title:

Per:

Name:
Title:

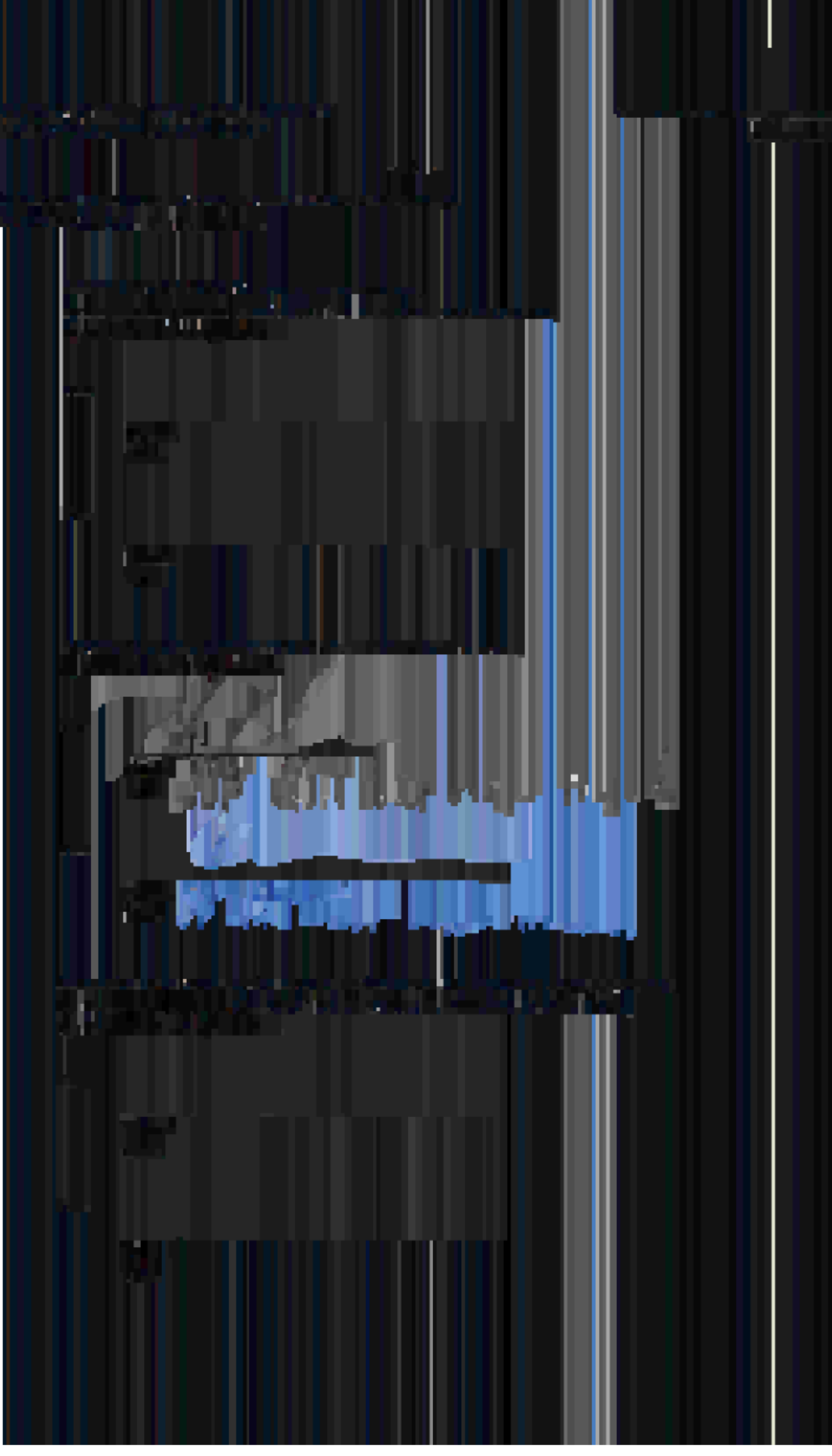
BELPACIFIC EXCAVATING & SHORING LIMITED PARTNERSHIP,
by its general partner **PACIFIC BLASTING & DEMOLITION LTD.**,
by its authorized signatories:

Per:

Name:
Title:

Per:

Name:
Title:



**PACIFIC GATEWAY CONSTRUCTORS GENERAL
PARTNERSHIP, by its partners:**

**CMI-HWY 91 LIMITED PARTNERSHIP,
by its general partner CMI-HWY 91 DESIGN BUILD LTD.,
by its authorized signatories:**

Per:

Name: Quentin Huillery
Title: Director

Per:

Name:
Title:

**AECON INFRASTRUCTURE MANAGEMENT INC.,
by its authorized signatories:**

Per:


Name:
Title:

Per:

Name:
Title:

**BELPACIFIC EXCAVATING & SHORING LIMITED PARTNERSHIP,
by its general partner PACIFIC BLASTING & DEMOLITION LTD.,
by its authorized signatories:**

Per:



Name: Dave Reynolds
Title: President + CEO

Per:

Name:
Title:

**SCHEDULE 1
DEFINITIONS AND INTERPRETATION**

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PART 1
DEFINITIONS

1.1 Definitions

In this Agreement, including the Recitals and Schedules hereto, unless otherwise specified or the context otherwise requires, the following words and expressions have the following meanings:

“**AASHTO**” means American Association of State Highway and Transportation Officials.

“**Abandonment of Approval 106335**” means a letter, to be provided by the MOE, outlining the requirements for disturbance and movement of soils to be undertaken by the Project within the Sunbury lands, including construction, site documentation and monitoring requirements and which will reference the 2015 Abandonment Approval Letter 106335.

“**Access Period**” means the period:

- (a) commencing on the date from which such part of the Project Site is made available to the Design-Builder pursuant to Section 1.3 [Commencement of Access to Project Site] of Schedule 8; and
- (b) ending on the date on which the Design-Builder’s access to such part of the Project Site terminates pursuant to Section 1.4 [Termination of Access to Project Site] of Schedule 8.

“**Advisory Signing Plan**” means the sub-plan of the Traffic Communications Plan described in Section 7.2.4 [Traffic Communications Plan] of Part 4 of Schedule 4.

“**Agreed Remedy Cost**” has the meaning given in Section 6.5(b)(ii) of Part 3 [Design and Certification Procedure] of Schedule 4.

“**Agreement**” means this agreement including all recitals and Schedules to this agreement, as amended, supplemented or restated from time to time by agreement in writing signed by the parties.

“**ALC Resolution**” means the reasons for decision of the Executive Committee of the British Columbia Agricultural Land Commission Resolution, #321/2018 released October 9, 2018 in regards to ALC Application ID 56769 submitted pursuant to Section 6 of the *Agricultural Land Reserve Use, Subdivision and Procedure Regulation* (British Columbia).

“**Applicant**” has the meaning given in Section 8.1(a).

“**Apprenticeship and Skills Training Plan**” has the meaning given in Section 2.4(a) of Schedule 21 [Community Benefits Requirements].

“**Approved Purposes**” means any purpose in connection with this Agreement, the Project, the Project Work, the Project Site, the Project Infrastructure or any part of any of them.

“**Arbitration Dispute Notice**” has the meaning given in Section 4.1 [Referral to Arbitration] of Schedule 16.

“**Arbitrator**” has the meaning given in Section 4.5 [No Conflict for Arbitrator] of Schedule 16.

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“**Architect**” means a person having a Certificate of Practice with the Architectural Institute of British Columbia.

“**ASTM**” means the American Society for Testing and Materials.

“**Background IP**” means the Intellectual Property specifically identified as Background IP in Appendix C [Background IP and Third Party IP] to this Schedule and that is or will be embedded in or used in connection with the Project Intellectual Property, or necessary or desirable to implement, operate or exploit the Project Intellectual Property, but which was not created or brought into existence for any of the Project Intellectual Property Purposes and provided that, for clarity, the “**Background IP**” does not include any of the Third Party IP.

“**BCICAC**” means the British Columbia International Commercial Arbitration Centre.

“**BCTFA**” has the meaning given in the Recitals.

“**Best Management Practices**” means the environmental best management practices applicable for highway construction, including but not limited to Good Industry Practice and the Reference Documents.

“**BMIS**” or “**Bridge Management Information System**” means the Ministry’s corporate structure asset management application that is used to maintain inventory and condition data for Structures to support the Ministry programs.

“**BNSF**” means Burlington Northern Santa Fe Railway Company.

“**Bonds**” means a performance bond and a labour and materials payment bond, each:

- (a) in the form attached as Schedule 14 [Specimen Bonds] or in substantially equivalent form acceptable to the Province;
- (b) in the amount of \$25,000,000; and
- (c) issued by a surety licensed to transact the business of a surety in British Columbia and acceptable to the Province, acting reasonably.

“**Bridge**” means a structure providing a means of transit for pedestrians, cyclists and/or vehicles above the land and/or water surface of a valley, arroyo, gorge, river, stream, lake, canal, tidal inlet, gut or strait, above a highway, railway or other obstruction, whether natural or artificial and consisting of the following essential parts:

- (a) the Substructure consisting of its abutments and pier or piers supporting the Superstructure;
- (b) the Superstructure slab, girder, truss, arch or other span or spans supporting the highway loads and transferring to them the Substructure; and
- (c) the highway and its incidental parts functioning to receive and transmit traffic loads.

“**Bridge Deck**” means the structural element under the deck wearing surface system that transfers loads from the deck surface to the Bridge’s Superstructure or Substructure components.

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“**Bridge Structural Engineer**” means a Professional Engineer specializing in Bridge structural design, construction, maintenance and rehabilitation.

“**Business Day**” means a day other than a Saturday, Sunday or Statutory Holiday in British Columbia.

“**CASL**” means *An Act to promote the efficiency and adaptability of the Canadian economy by regulating certain activities that discourage reliance on electronic means of carrying out commercial activities, and to amend the Canadian Radio-television and Telecommunications Commission Act, the Competition Act, the Personal Information Protection and Electronic Documents Act and the Telecommunications Act (Canada).*

“**Category III Structures**” means Structures that meet any of the criteria set out in Section 3.2(d) of Part 3 [Design and Certification Procedure] of Schedule 4.

“**CEAA Screening Report and Decision Letter**” means the screening recommendation and decision summary, Canadian Environmental Assessment Registry File No.: 06-01-24060, dated July 28, 2008 provided by the CEAA at the conclusion of the CEAA screening assessment conducted as part of the harmonized federal/provincial review undertaken for the Environmental Assessment Application review processes, as attached as Part 2 [CEAA Screening Report and Decision Letter] to Appendix A to Schedule 6, and as amended, supplemented or replaced from time to time.

“**Certificate**” means any certificate in the form of one of the certificates set out in Appendix C [Form of Certificates] to Schedule 4.

“**Certificate of Substantial Completion**” means the Certificate issued by the Owner’s Engineer in accordance with Article 6 [Construction Certification] of Part 3 of Schedule 4 confirming the achievement of Substantial Completion.

“**Certificate of Total Completion**” means the Certificate issued by the Owner’s Engineer in accordance with Article 6 [Construction Certification] of Part 3 of Schedule 4 confirming the achievement of Total Completion.

“**Change Certificate**” has the meaning given in Section 2.7 [Change Certificate] of Schedule 11.

“**Change in Control**” means a Change in Ownership resulting in a change of the person or persons having Control of the Design-Builder.

“**Change in Costs**” means, in respect of any Province Change or Supervening Event, the net amount (calculated in accordance with Sections 2.3 [Preparation of Change Report] and 2.4 [Valuation of Change in Costs] of Schedule 11), which may be positive or negative, of:

- (a) all additional costs (including direct and indirect costs, capital expenditure costs and financing costs) which the Design-Builder reasonably expects to incur as a direct consequence of implementing the Province Change which the Design-Builder would not incur if the Province Change is not implemented, or as a result of such Supervening Event, as the case may be; and
- (b) any cost savings (including direct and indirect costs, capital expenditure costs and financing costs) or other credits which the Design-Builder can realize as a direct consequence of implementing the Province Change, including costs which the Design-

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Builder would incur if the Province Change is not implemented, or as a result of such Supervening Event, as the case may be.

“**Change in Law**” means the coming into force, after the Financial Submittal Date, of any new Law in Canada (including a new Law relating to Taxes), or any amendment to or repeal of any existing Law in Canada (including an existing Law relating to Taxes) (but excluding in each case any lawful requirements of any Governmental Authority (unless resulting from a Change in Law)) which is binding on the Design-Builder, but excluding any such new Law or amendment or repeal:

- (a) relating to Taxes or any amendment to or repeal of any existing Law relating to Taxes that in either case is of general application in respect of capital or large corporations taxes, the rate of taxation applicable to the general income of a person or a change in the manner of calculation of the general income of a person;
- (b) arising from any change in the interpretation of any Law, other than a judgement of a relevant Court which changes binding precedent in British Columbia;
- (c) arising from or in any way connected to or having substantially the same effect as any Law which, as of the Financial Submittal Date:
 - (i) had been introduced as a Bill in the Legislative Assembly of British Columbia or the Parliament of Canada or in a draft statutory instrument published or issued by a Governmental Authority; or
 - (ii) had been published in the Canada Gazette or in a draft bill as part of a Governmental Authority discussion or consultation paper;
- (d) relating to the application for, coming into effect, terms, implementation, repeal, revocation or otherwise of any Permit; or
- (e) consisting of an amendment, replacement or repeal of any of the Reference Documents.

“**Change in Ownership**” means, with respect to a person, a change in the ownership, whether beneficial or otherwise, of the shares or units of ownership of such person, or in the direct or indirect power to vote or transfer any of the shares or units of ownership of such person.

“**Change Report**” has the meaning given in Section 2.3 [Preparation of Change Report] of Schedule 11.

“**Changeable Message Sign**” or “**CMS**” means an electronically programmable sign that is used to display traffic information to travellers.

“**Checking Team**” means the relevant group of engineers assigned to independently undertake a design check in accordance with the Design and Certification Procedure.

“**CHRIS**” or “**Corporate Highway & Resource Information System**” means the Ministry’s corporate application that is used to maintain inventory and condition data for inventory other than Structures to support the Ministry programs.

“**Claim**” means any claim, demand, action, cause of action, suit or proceeding.

“**Clear Zone**” has the meaning as set out in the BC Supplement to TAC.

“**Closure**” means any partial or total closure, obstruction, blockage or other restriction or interference (howsoever arising) impeding the flow of traffic on or affecting the ability of the public to pass and re-pass over a highway of whatever duration including any partial or total closure, obstruction, blockage, restriction or interference:

- (a) that is instigated by the Design-Builder;
- (b) that is required for any works by a Governmental Authority or for any inspection, investigation or survey (whether carried out by the Design-Builder, the Province or any Governmental Authority or any other person);
- (c) that results from an Incident;
- (d) that is instigated by the Police or other Relevant Authority for health, safety or emergency reasons or that results from Protest Action; or
- (e) that materially affects the ability to use that highway or such part thereof in a safe manner resulting from the build up of snow or ice or from any other natural event physically affecting the highway,

but excluding a Stoppage, and provided also that any traffic congestion or slowing of the flow of traffic in a lane or lanes within the highway will not by itself be considered to be a Closure (including where the same results from speed restrictions properly imposed from time to time as a direct result of adverse weather conditions or seasonal restrictions for the time being affecting the highway, but excluding where the standard of construction and/or condition of the highway has contributed to the need for such speed restrictions).

“**CMBC**” means Coast Mountain Bus Company.

“**CN Rail**” means Canadian National Railway Company.

“**Commissioner**” means the Information and Privacy Commissioner under FOIPPA.

“**Communications and Engagement**” means all activities carried out by the Design-Builder in accordance with Schedule 9 [Communications and Engagement] and any other activities of a communications nature set out in this Agreement.

“**Communications and Engagement Obligations**” has the meaning given in Section 2.1 [Communications and Engagement Obligations] of Schedule 9.

“**Communications Manager**” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

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“Community and Stakeholder Engagement” means:

- (a) building relationships with and keeping the public, local residents and businesses, and adjacent property owners informed, gathering input and feedback, and responding to questions and concerns; and
- (b) building relationships with and keeping designated Stakeholders informed through on-going two-way communication about the Project, gathering input and feedback, and responding to questions and concerns, planning and organizing formal working groups, and organizing and/or attending other meetings that the Province may deem appropriate.

“Community Benefits Plan” has the meaning given in Section 1.5(a) of Schedule 21 [Community Benefits Requirements].

“Community Benefits Requirements” has the meaning given in Section 1.1 [Community Benefits Requirements] of Schedule 21.

“Compensation Event” means any of the following events or circumstances:

- (a) a breach by the Province of Section 2.5(a)(i), Section 2.5(c) or Section 2.1 [Handover of Lands] of Schedule 8;
- (b) the circumstances referred to in Section 2.15(d) as constituting a Compensation Event;
- (c) the existence as at the Financial Submittal Date of any Project Site Agreement, Encumbrance or Utility Agreement, or any amendment to any thereof, affecting any Project Lands or any Infrastructure on any Project Lands, that:
 - (i) in the case of a Project Site Agreement or Encumbrance, is not described in or referred to in either of Appendix A [Project Lands] or Appendix B [Certain Project Site Encumbrances] to Schedule 8;
 - (ii) is not registered in the Land Title Office against title to any Project Lands as at the Financial Submittal Date; and
 - (iii) the Design-Builder does not otherwise have knowledge of, could not have discovered through the exercise of reasonable due diligence (provided that any investigation of Crown grants or unregistered leases shall be deemed not to be required for reasonable due diligence to have been exercised for these purposes) and could not reasonably have been anticipated from an analysis of all relevant information available to the Design-Builder (including the Disclosed Data) as at the Financial Submittal Date, having regard to the opportunity afforded the Design-Builder to conduct such due diligence and analysis before the Financial Submittal Date;
- (d) a claim asserting infringement of indigenous rights or indigenous treaty rights or indigenous title by any indigenous group(s), but not including any Protest Action resulting from or in connection with any such claim (provided that, for certainty, the exclusion of any such Protest Action from this paragraph (d) shall not prejudice any

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otherwise valid claim that the Design-Builder may have as a result of the occurrence of a Compensation Event referred to in paragraph (o) of this definition;

- (e) any defect in the Environmental Assessment Certificate other than in connection with changes or amendments to the Environmental Assessment Certificate that are the responsibility and risk of the Design-Builder pursuant to Section 1.4 [Environmental Impacts and Changes to Environmental Permits] of Schedule 6;
- (f) the circumstances referred to in Section 4.20(c) as constituting a Compensation Event;
- (g) delay by the Province in disbursing Property Damage Insurance Proceeds in accordance with Section 6.18(c) or Section 6.18(d), as applicable, after all conditions to such authorization and direction have been satisfied, beyond the relevant time periods provided for in those Sections;
- (h) the circumstances referred to in Section 11.2(c) as constituting a Compensation Event;
- (i) the circumstances referred to in Section 11.3(c) as constituting a Compensation Event;
- (j) the circumstances referred to in Section 11.4(d) as constituting a Compensation Event;
- (k) the circumstances referred to in Section 11.5(c) as constituting a Compensation Event;
- (l) the circumstances referred to in Section 17.2(b)(iv) as constituting a Compensation Event;
- (m) the existence of any Province Subsequent Contamination, except to the extent:
 - (i) any actions required to be taken by the Design-Builder pursuant to Part 3 [Contamination and Hazardous Substances] of Schedule 6 in respect of such Province Subsequent Contamination are required to be taken as a result of or in connection with the Design-Builder or any person for whom the Design-Builder is in law responsible causing, contributing to or exacerbating any such Province Subsequent Contamination; or
 - (ii) any such Province Subsequent Contamination is caused, contributed to or exacerbated by the Design-Builder or any person for whom the Design-Builder is in law responsible;
- (n) the circumstances referred to in Section 2.2(f)(i) of Schedule 2 [Representatives, Review Procedure and Consent Procedure] as constituting a Compensation Event;
- (o) subject to Section 8.9(a), a Protest Action;
- (p) a Discriminatory Change in Law;
- (q) damage to or destruction of the Project Infrastructure or part thereof caused by a Seismic Event;
- (r) damage to or destruction of the Project Infrastructure or part thereof caused by a Flood;

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- (s) any wilful misconduct, negligent act or negligent omission of any Third Party Contractor on or about the Project Site occurring on or after the Effective Date; and
- (t) the existence of a Nonconformity caused solely by a Province Non-Excusable Event; or
- (u) it has been determined by a court of competent jurisdiction, without any further rights of appeal, that:
 - (i) a part of the Project Site is not a “highway” as defined by the *Transportation Act* (British Columbia); and
 - (ii) the *Builders Lien Act* (British Columbia) applies to that part of the Project Site.

“**Competitive Procurement Requirements**” means all applicable requirements of Laws, including all treaties or agreements relating to trade to which the Province is a party from time to time, and of procurement policies or guidelines of the Province in effect from time to time.

“**Complete License**” means, in respect of any Licensed Property, a non-exclusive, perpetual, irrevocable, worldwide, royalty-free, fully-paid, sublicensable, transferable and assignable licence or sub-licence (if applicable) for the Province, BCTFA, their employees, agents, contractors, consultants, advisors, sublicensees, successors and assigns to do any one or more of the following for any one or more of the Complete License Purposes:

- (a) exercise, in respect of the Licensed Property, all of the rights set out in the *Copyright Act* (Canada), including the right to use, reproduce, make Modifications to, publish, distribute and otherwise use the Licensed Property in any medium or format, whether now known or hereafter devised;
- (b) use, make, have made and otherwise implement, operate or exploit any product or service based on, embodying, incorporating or derived from the Licensed Property; and
- (c) exercise any and all other past, present or future rights in and to the Licensed Property.

“**Complete License Purposes**” means, for any Licensed Property, any and all use whatsoever in relation to any design, construction, completion, commissioning, testing, operation, maintenance, repair, modification, alteration, adaptation, rehabilitation, improvement, expansion, extension, financing or regulation (including with respect to the contemplation, procurement or undertaking of any such activities by the Province or any third parties) in connection with the applicable Approved Purposes for such Licensed Property, and/or, for all Licensed Property, the carrying out of any statutory, public or other powers, authorities, discretions, duties or functions in respect of any of the foregoing, including the development of transportation standards, policies and procedures.

“**Compulsory Acquisition Laws**” means all Laws authorizing the expropriation or other compulsory acquisition of land or Land Rights, including the *Transportation Act* (British Columbia), the TIA and the *Expropriation Act* (British Columbia).

“**Compulsory Acquisition Order**” means any order or other process of any Court or other relevant body or authority pursuant to a Compulsory Acquisition Law effecting the expropriation or other compulsory acquisition of any land or Land Rights in any Project Lands forming or intended to form part of the

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Project Site, but does not include an agreement entered into pursuant to Section 3 of the *Expropriation Act* (British Columbia).

“**Conditions of Access**” has the meaning given in Section 1.1 [Conditions of Access] of Schedule 8.

“**Confidential Information**” means all confidential or proprietary information of a party that is (whether before, on or after the Effective Date) supplied, or to which access is granted, to or on behalf of another party pursuant to or relating to this Agreement (including the terms of this Agreement and any documents or information supplied in the course of proceedings under the Dispute Resolution Procedure), either in writing, or in any other form, directly or indirectly pursuant to discussions with another party, and includes all documents, computer records, specifications, formulae, evaluations, methods, processes, technical descriptions, reports, analyses, compilations, studies and other data, records, drawings and information and other documents whether prepared by or on behalf of a party which contain or otherwise reflect or are derived from such information, and expressly includes Disclosed Data, Personal Information.

“**Consent Procedure**” means the procedure defined in Section 2.2 [Consent Procedure] of Schedule 2 whereby submissions for consent in respect of certain matters are made by the Design-Builder to the Province’s Representative.

“**Consequential Losses**” means any damages or losses that would be considered under applicable British Columbia law to constitute consequential damages or losses, whether or not any such loss arises directly or indirectly from the incident giving rise to the claim and whether foreseeable or not, howsoever caused, even if a party knew or should have known of the possibility or likelihood of such damage or such loss.

“**Construction**” means:

- (a) the performance of all construction, alteration, augmenting, upgrading, installation, configuration, integration, completion, testing, commissioning and other services and activities, including site preparation and decommissioning, required to be performed or carried out by the Design-Builder to construct and complete the New Project Infrastructure in accordance with the Final Design for the New Project Infrastructure in order to achieve Total Completion;
- (b) the performance of all project management, quality management, environmental management, communications management and other management services and activities required to be performed or carried out by the Design-Builder for the carrying out of the foregoing;
- (c) the supply by the Design-Builder of all Plant, Construction Plant, other property, workers and materials for the performance or carrying out of the foregoing; and
- (d) all other work, services and activities to be provided by the Design-Builder in respect of the foregoing,

all as set out and described in and in accordance with this Agreement, including the Design and Construction Requirements and the Design and Certification Procedure.

“**Construction Certificate**” means a Certificate in respect of the Construction as provided by the Design-Builder pursuant to the Design and Certification Procedure.

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“**Construction Communications and Engagement Plan**” has the meaning given in Section 2.5(a) of Schedule 9 [Communications and Engagement].

“**Construction Environmental Management Plan**” means the plan prepared by the Design-Builder in accordance with Section 2.6 [Construction Environmental Management Plan] of Schedule 6.

“**Construction Manager**” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

“**Construction Management Plan**” has the meaning given in Section 1.5 [Construction Management Plan] of Schedule 3.

“**Construction Plant**” means plant, materials, tools, implements, equipment, machinery, vehicles, temporary buildings and structures, whether owned or leased by the Design-Builder or a Subcontractor, necessary for or used or to be used in the performance of the Project Work, but does not include Plant.

“**Construction Quality Management Plan**” or “**CQMP**” means the plan for the quality management of the Construction prepared by the Design-Builder in accordance with Appendix C [Construction Quality Management Plan] to Schedule 7.

“**Construction Records**” means all stand-alone documents of any kind, including records, plans and drawings, including installation drawings, as applied for construction purposes and as modified during construction, so as to constitute a complete and accurate record of the as-built features of the Project Infrastructure.

“**Construction Specifications**” means the specifications, criteria and requirements for materials and products, procedures and methodology for providing, performing and carrying out the Design and Construction as developed by the Design-Builder in accordance with this Agreement.

“**Contamination**” means the presence of any Hazardous Substance in the environment (including Hazardous Substances that occur naturally in the environment or result from natural processes such as, for example, Hazardous Substances resulting from acid-generating rock), except Hazardous Substances present in the environment in quantities or concentrations below permissible levels as set by applicable Environmental Laws. If Contamination is present in soil, soil vapour, surface water, sediment or ground water, then the soil, soil vapour, surface water, sediment or groundwater, as the case may be, containing the Contamination will also be deemed for the purposes of this Agreement to be Contamination.

“**Contract Price**” has the meaning given in Section 10.1(a).

“**Contract Year**” means each period of 12 calendar months commencing on January 1 and ending on December 31 during the Term, provided that:

- (a) the first Contract Year shall be the period from the Effective Date to the next following December 31; and
- (b) the last Contract Year shall be the period ending on the Termination Date and beginning on the next preceding January 1.

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“**Control**” of a person means any of the following:

- (a) the power to direct or cause the direction of the management, actions, policies or decisions of that person, whether directly or indirectly through other persons, and whether through the ownership of shares, voting securities, partnership interests, units of ownership, or other ownership interests, or by contract, or otherwise;
- (b) legal or beneficial ownership or control over equity or ownership interests in that person, whether directly or indirectly through other persons:
 - (i) having a subscribed value (taking into account contributions to be made) of more than one half of the subscribed value (taking into account contributions to be made) of all equity or ownership interests in that person; or
 - (ii) carrying more than one half of the voting rights for:
 - (A) the management, actions, policies or decisions of that person; or
 - (B) the election or appointment of directors or managers of that person; or
- (c) if the person is a corporation, “**control**” within the meaning of Section 2(3) of the *Business Corporations Act* (British Columbia) in effect as at the Effective Date,

and “**Controlled**” has the corresponding meaning.

“**Correction**” means one of the following actions to eliminate a detected Nonconformity:

- (a) Rework;
- (b) Repair;
- (c) Reject; and
- (d) Use as Is.

“**Corrective Action**” means an action to eliminate the cause of an existing Nonconformity, defect or other undesirable situation to prevent its recurrence.

“**Cost Item**” means each discrete portion of the Design and Construction components (as applicable) of the Project Work that is identified in Appendix B [Progress Measurement Principles] to Schedule 10.

“**Cost Item Amount**” means the amount of deemed costs, expressed in dollars, attributable to each Cost Item, as set out in Appendix B [Progress Measurement Principles] to Schedule 10.

“**Cost Item Progress Amount**” has the meaning given in Section 2.1(b) of Schedule 10 [Payment and Performance Mechanism].

“**Court**” means the Supreme Court of British Columbia and courts of appeal therefrom.

“**CSA**” means the Canadian Standards Association.

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“**Data Room**” means the secure website established by the Province in connection with the procurement process for the Project prior to the Effective Date and includes all of its contents, including the materials, documents, information and data contained therein, either directly or by an external link; for record purposes, the content of the said secure website, both as at the Financial Submittal Date and as at the Effective Date, has been preserved and distributed to the parties.

“**Deck**” means the portion of a Bridge that supports the highway, from the top of the major structural members to the Wearing Surface, and designed to distribute loads evenly across the Bridge.

“**Deck Wearing Surface System**” means the replaceable surface and waterproofing elements that protect the Bridge Deck from abrasion and the ingress of water and chlorides.

“**Default Points**” means those points assigned to the Design-Builder in accordance with Section 5.4 [Assignment of Default Points] of Schedule 10.

“**Default Points Balance**” has the meaning given in Section 5.4(e)(ii) of Schedule 10 [Payment and Performance Mechanism].

“**Default Rate**” at any time means simple interest at an annual rate that is per annum over the Prime Rate at that time. If and when the Prime Rate changes, the Default Rate shall automatically change by the same amount at the same time.

“**Deferred Electrical and Lighting**” has the meaning given in paragraph (c) of the definition of “Substantial Completion” in this Section.

“**Deferred Paving**” has the meaning given in paragraph (a) of the definition of “Substantial Completion” in this Section.

“**Deficiency Holdback**” has the meaning given in Section 3.1(c) of Schedule 5 [Project Work Defects and Warranties].

“**Delay Liquidated Damages**” has the meaning given in Section 3.2(a) of Schedule 10 [Payment and Performance Mechanism].

“**Design**” means:

- (a) the production of the compendium of drawings, plans, specifications, calculations and other material produced by or on behalf of the Design-Builder to calculate and define the Construction necessary to carry out and complete the New Project Infrastructure in accordance with the Design and Construction Requirements and the other applicable Project Requirements, including the preparation of all reports, design drawings, construction drawings and Construction Records;
- (b) the performance of all project management, quality management, environmental management, communications management and other management services and activities required to be performed or carried out by the Design-Builder for the carrying out of the foregoing;
- (c) the supply by the Design-Builder of all Plant, Construction Plant, other property and workers for the carrying out of the foregoing; and

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- (d) all other work, services and activities to be provided by the Design-Builder in respect of the foregoing,

all as set out and described in and in accordance with this Agreement, including the Design and Construction Requirements and the Design and Certification Procedure.

“Design and Certification Procedure” means the procedure defined in Part 3 [Design and Certification Procedure] of Schedule 4 for the review of Design Data in connection with the Project Work.

“Design and Construction Requirements” means all standards, specifications (including the Construction Specifications), procedures, design criteria, design guidelines and other requirements applicable to all design activities included within the Project Work, including the Design, and to all Construction, all as set out in this Agreement as at the Effective Date and as amended, supplemented or replaced from time to time after the Effective Date in accordance with this Agreement.

“Design-Builder” has the meaning given in the Recitals.

“Design-Builder Breakage Costs” means, without duplication, Direct Losses sustained by the Design-Builder as a direct result of the early termination of this Agreement, but only to the extent that:

- (a) the Direct Losses are incurred in connection with the Project and in respect of the performance of the Project Work, including, without duplication:
- (i) costs of materials or goods ordered or subcontracts placed that cannot be cancelled without such Direct Losses being incurred;
 - (ii) expenditures reasonably incurred in anticipation of the performance of the Project Work in the future;
 - (iii) demobilisation costs, including the cost of any relocation of Construction Plant used in connection with the Project Work; and
 - (iv) termination payments that are required under applicable Laws or under lawful contracts of employment to be made to employees of the Design-Builder and are reasonably and properly incurred by the Design-Builder arising as a direct result of termination of this Agreement (provided that the Design-Builder takes all reasonable steps to mitigate such termination payments) and provided that in calculating such amount no account will be taken of any liabilities and obligations of the Design-Builder arising out of:
 - (A) contracts of employment or other agreements entered into by the Design-Builder to the extent that such contracts of employment or agreements were not entered into substantially in connection with the Project; or
 - (B) contracts of employment or other agreements entered into by the Design-Builder to the extent that such contracts of employment or agreements were not entered into in the ordinary course of business and on reasonable commercial arm’s length terms;

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- (b) the Direct Losses are incurred under arrangements and/or agreements that are consistent with terms that have been entered into in the ordinary course of business and on reasonable commercial terms; and
- (c) the Design-Builder has used all reasonable efforts to mitigate the Direct Losses,

and provided that no compensation for loss of future profits of the Design-Builder will be included in such Direct Losses.

“Design-Builder Communication Protocol” has the meaning given in Section 2.4 [Design-Builder Communication Protocol] of Schedule 9.

“Design-Builder Default” has the meaning given in Section 12.1 [Design-Builder Default].

“Design-Builder Default Termination Sum” has the meaning given in Section 2.1 [Obligation to Pay Compensation on the Design-Builder Default] of Schedule 13.

“Design-Builder Indemnified Person” means:

- (a) the Design-Builder’s Representative in its capacity as such under this Agreement;
- (b) any agent or professional advisor (including legal and financial advisor) of the Design-Builder (excluding Subcontractors), in its capacity as such in connection with the Project; and
- (c) any director, officer or employee of the Design-Builder or of any person falling within paragraph (b) of this definition.

“Design-Builder Insolvency Event” means the occurrence of any of the following:

- (a) any resolution of the Design-Builder or any Partner of the Design-Builder or the directors of the general partner of any Partner is passed for the dissolution, liquidation or winding-up of the Design-Builder, any Partner or the general partner of any Partner, or for the suspension of operations of the Design-Builder or any Partner or the general partner of any Partner, or authorizing any of the actions in any of paragraphs (b) through (f) of this definition;
- (b) a decree, declaration or order of a court having jurisdiction is issued or entered, adjudging the Design-Builder or any Partner or the general partner of any Partner bankrupt or insolvent, or ordering the winding-up or liquidation of the Design-Builder or any Partner or the general partner of any Partner, or approving any reorganization, arrangement, compromise, composition, compounding, extension of time, moratorium or adjustment of liabilities of the Design-Builder or any Partner or the general partner of any Partner under the *Companies’ Creditors Arrangement Act* (Canada), the *Bankruptcy and Insolvency Act* (Canada) or the *Winding-up and Restructuring Act* (Canada) or any other bankruptcy, insolvency, moratorium, reorganization or analogous law of any applicable jurisdiction, or any action or proceeding is commenced or instituted against the Design-Builder or any Partner or the general partner of any Partner for any of the foregoing and such action or proceeding against the Design-Builder or any Partner or the general partner of any Partner continues unstayed and is not withdrawn or dismissed within 45 days after it is

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commenced or instituted, or any action or proceeding is commenced or instituted by the Design-Builder or any Partner or the general partner of any Partner for any of the foregoing;

- (c) if execution, distress, sequestration or any analogous process is issued, filed or levied against the Design-Builder or any Partner or the general partner of any Partner or against all or a substantial part of the property or assets of the Design-Builder or any Partner or the general partner of any Partner and such execution, distress, sequestration or other process continues unstayed and in effect and is not withdrawn, dismissed, overturned or set aside within the period of 45 days following its issuance or filing and such execution, distress, sequestration or analogous process has or could reasonably be expected to have a material adverse effect on the performance by the Design-Builder of its obligations under this Agreement;
- (d) a trustee, receiver, receiver and manager, interim receiver, custodian, liquidator, provisional liquidator, agent for a secured creditor, or other person with similar powers, is appointed in any manner in respect of the Design-Builder or any Partner or the general partner of any Partner or in respect of all or a substantial portion of the property and assets of the Design-Builder or any Partner or the general partner of any Partner, or any creditor takes control of the Design-Builder or any Partner or the general partner of any Partner or of all or a substantial portion of the property and assets of the Design-Builder or any Partner or the general partner of any Partner or any action or proceeding is commenced or instituted against the Design-Builder or any Partner or the general partner of any Partner for any of the foregoing and such action or proceeding against the Design-Builder or any Partner or the general partner of any Partner continues unstayed and is not withdrawn or dismissed within 45 days after it is commenced or instituted, or any action or proceeding is commenced or instituted by the Design-Builder or any Partner or the general partner of any Partner for any of the foregoing;
- (e) the Design-Builder or any Partner or the general partner of any Partner admits its inability to pay or fails to pay its debts generally as they become due, acknowledges its insolvency, makes an assignment in bankruptcy or makes any other assignment for the benefit of creditors, or files any proposal, notice of intention or petition or otherwise commences or consents to or acquiesces in the commencement of any proceeding seeking any reorganization, arrangement, compromise, composition, compounding, extension of time, moratorium or adjustment of liabilities of the Design-Builder or any Partner or the general partner of any Partner under the *Companies' Creditors Arrangement Act* (Canada), the *Bankruptcy and Insolvency Act* (Canada) or the *Winding-up and Restructuring Act* (Canada) or any other bankruptcy, insolvency, moratorium, reorganization or analogous law of any applicable jurisdiction, or consents to or acquiesces in the appointment in any manner of a trustee, receiver, receiver and manager, interim receiver, custodian, liquidator, provisional liquidator, agent for a secured creditor or other person with similar powers in respect of the Design-Builder or any Partner or the general partner of any Partner or in respect of all or a substantial portion of the property or assets of the Design-Builder or any Partner or the general partner of any Partner; or
- (f) the Design-Builder or any Partner or the general partner of any Partner suffers any event, or any event or set of circumstances occurs or comes about, analogous to any of the foregoing events or sets of circumstances set out in this definition, in any jurisdiction in

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which the Design-Builder or any Partner or the general partner of any Partner is incorporated, formed, domiciled or resident.

“**Design-Builder Irrecoverable Losses**” means:

- (a) any loss of revenue and loss of profits that might have been, or might be, obtained or received from a source other than the Project;
- (b) any loss of business opportunity or other loss of opportunity with respect to a source other than the Project; and
- (c) Consequential Losses suffered by:
 - (i) any Subcontractor (save to the extent expressly provided otherwise in the definition of Material Subcontractor Breakage Costs in this Section 1.1);
 - (ii) any Affiliate or former Affiliate of a Subcontractor (except any Affiliate or former Affiliate that is itself a Subcontractor at the time that any such Consequential Losses are suffered, in which event paragraph (c)(i) of this definition shall apply, and provided that this exception shall only apply to the extent that any Consequential Losses suffered are in such Affiliate’s or former Affiliate’s capacity as a Subcontractor);
 - (iii) any Relevant Person (except any Relevant Person that is a Subcontractor at the time that any such Consequential Losses are suffered, in which event paragraph (c)(i) of this definition shall apply, and provided that this exception shall only apply to the extent that any Consequential Losses suffered are in such Relevant Person’s capacity as a Subcontractor); and
 - (iv) any third party (other than a person referred to in any of subsections (c)(i), (c)(ii) and (c)(iii) of this definition) for which the Design-Builder or a Subcontractor is, pursuant to a contractual commitment entered into by the Design-Builder or a Subcontractor with such third party, liable to indemnify such third party (in this definition, a “**Design-Builder Contractual Commitment**”) where:
 - (A) the entering into by the Design-Builder or Subcontractor of the Design-Builder Contractual Commitment was avoidable with the exercise of reasonable diligence and foresight; or
 - (B) the nature, scope, extent and terms of the indemnification provisions contained in the Design-Builder Contractual Commitment (including any liability of the Design-Builder or Subcontractor in respect of Consequential Losses) were, at the time such Design-Builder Contractual Commitment was entered into, not on reasonable arm’s length commercial terms or otherwise not in the ordinary course of business; or
 - (C) the Design-Builder Contractual Commitment was entered into for a reason other than:
 - (1) the *bona fide* pursuit of completion of the Project Infrastructure;

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- (2) the performance of the Project Work; and
- (3) the furtherance of the Design-Builder's obligations in respect of the Project.

"Design-Builder Non-Excusable Event" means any of the following:

- (a) any wrongful act, wrongful omission, negligent act, negligent omission or wilful misconduct; or
- (b) any breach in the performance or observance of any of the Design-Builder's obligations under this Agreement or any other Project Document,

of or by the Design-Builder or any person for whom the Design-Builder is in law responsible.

"Design-Builder Proposal" means any of the following as initiated by the Design-Builder:

- (a) a variation in the design, quality or scope of the New Project Infrastructure, or the construction thereof;
- (b) any other variation in the Project Requirements or this Agreement; or
- (c) any other matter which, by the terms of this Agreement, is stated to constitute a Design-Builder Proposal or in respect of which the provisions of Section 7.2 [Design-Builder Proposals] are stated to be applicable.

"Design-Builder's Environmental Obligations" means:

- (a) the obligations of the Design-Builder under this Agreement to comply with and carry out all requirements of Environmental Laws, the Environmental Assessment Certificate in connection with the Project Work; and
- (b) the obligations of the Design-Builder described in Schedule 6 [Environmental Obligations], including with respect to remediation of Contamination on Project Lands.

"Design-Builder's Representative" means the person identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure] or such substitute as may be appointed by the Design-Builder pursuant to Section 3.2 [Change of the Design-Builder's Representative] thereof.

"Design Certificate" means a Certificate in respect of the Design as issued by the Design-Builder pursuant to the Design and Certification Procedure.

"Design Data" means all calculations, designs, design or construction information, criteria, standards, specifications, plans, reports, drawings, graphs, sketches, models and other materials, including all eye readable or computer or other machine readable data and including all design submissions required under the Project Requirements, used or to be used for the Project Work, any Province Change, or a Design-Builder Proposal accepted by the Province in accordance with Schedule 11 [Changes].

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“**Designer**” means McElhanney Engineering Services Ltd. or any assignee or replacement permitted under this Agreement.

“**Design Life**” means the period of time during which the structural component performs its intended function without significant repairs, rehabilitation or replacement.

“**Design Management Plan**” means the Design Management Plan submitted by the Design-Builder in accordance with Section 1.1 [Submission of Design Management Plan] of Part 3 of Schedule 4.

“**Design Manager**” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

“**Design Quality Management Plan**” or “**DQMP**” means the plan for the quality management of the Design prepared by the Design-Builder in accordance with Appendix B [Design Quality Management Plan] to Schedule 7.

“**Design Team**” means the group of Professional Engineers and others within a Designer’s organization undertaking the design or assessment of the Project Work in connection with the Project Requirements.

“**Detailed Design**” means the detailed design to be developed from the preliminary design shown in the Design and Construction Requirements in respect of each part of the Project Work so as to allow construction of that part in accordance with the Design and Construction Requirements and so as to comply with, fulfill and satisfy the requirements of the Design and Construction Requirements.

“**Detour Route**” means a route which takes traffic off the regular route and, using existing or newly made temporary roadways within the construction work zone, guides traffic around the work zone.

“**DFO**” means the Department of Fisheries and Oceans of the Federal Government.

“**Dike**” has the meaning given in the *Dike Maintenance Act* (British Columbia).

“**Direct Losses**” means Losses other than:

- (a) in the case of Losses suffered or incurred by the Province, Province Irrecoverable Losses; and
- (b) in the case of Losses suffered or incurred by the Design-Builder, the Design-Builder Irrecoverable Losses.

“**Disclosed Data**” means any and all information, data, reports and documents from time to time disclosed, provided or made available by the Province or its representatives or any other person on behalf of the Province to the Design-Builder or its representatives or to any Subcontractor or their representatives, or any Proponent Team Member of the Preferred Proponent (as both such terms are defined in the Request for Proposals) in connection with or pertaining to the Project, the Project Work, the Project Site, the Project Infrastructure, the requirements of any Governmental Authority, traffic records and forecasts or any obligations undertaken by the Design-Builder under this Agreement, and whether disclosed, provided or made available before, on or after the Effective Date, and including:

- (a) any Design Data provided or made available by or on behalf of the Province;

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- (b) the Reference Documents;
- (c) any and all plans, drawings, materials, books, records, files, correspondence, studies, tests, test results, test data, certificates, investigations, samples, surveys, reports, statements, documents, facts, information, projections and traffic information (including volume counts, classification counts, origin and destination data, speed and travel time information and vehicle jurisdiction data), including any of the foregoing stored electronically or on computer-related media;
- (d) the Factual Geotechnical Data;
- (e) any and all information relating to Contamination;
- (f) the data, reports and documents referred to in this Agreement including in any Schedule;
- (g) any of the foregoing provided in connection with the Request for Qualifications and/or the Request for Proposals;
- (h) anything contained in the Data Room, either directly or by an external link; and
- (i) the Land Identification Drawings, the Land Identification Sheets, and the information contained thereon.

“Discriminatory Change in Law” means a Change in Law consisting of the bringing into force, amendment or repeal of a Law by the Province which specifically and only applies to:

- (a) the Project and not to other highway projects whose design or construction are procured on a basis similar to the Project;
- (b) the Design-Builder and not to any other persons; or
- (c) the Design-Builder and other persons that have contracted with the Province or any other Governmental Authority on similar highway projects procured on a basis similar to the Project and not to any other person.

“Dispute Resolution Procedure” means the procedure set out in Schedule 16 [Dispute Resolution Procedure].

“Domestic Commercial Arbitration Rules” means the BCICAC’s Domestic Commercial Arbitration Rules of Procedure, as revised September 15, 2016 and as amended from time to time.

“Drainage Structures” mean the parts of the Infrastructure designed to carry water away from the Road Base, including ditches, culverts, spillways, dyking, flumes, and drains, and further defined as follows:

- (a) on highway features: curb and gutters, catch basins (including Sumps and Grates) and Manholes;
- (b) adjacent highway features: drainage ditches (lined and unlined), spillways and half round flumes; and

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- (c) under highway features: all culverts less than 3m in diameter or span, trash racks at inlets on minor culverts, fish passage features and Subsoil systems (pipes or filter layers).

“**Draw Request**” has the meaning given in Section 6.1(b) of Schedule 10 [Payment and Performance Mechanism].

“**Effective Date**” means the date of this Agreement.

“**EGBC**” means the Association of Professional Engineers and Geoscientists of British Columbia.

“**EGBC Bylaws**” means the bylaws of EGBC made under the *Engineers and Geoscientists Act* (British Columbia).

“**Emergency**” means the existence or occurrence of any of the following:

- (a) a serious threat or risk to:
- (i) the health or safety of members of the public;
 - (ii) the environment; or
 - (iii) the safety or integrity of the Project Infrastructure or any property adjacent to or in the vicinity of the Project Site;
- (b) any event or circumstance that prevents or unjustifiably restricts the use of the Project Infrastructure as a public highway; and
- (c) any event or circumstance in respect of the Project Infrastructure or the Project Site that prevents the Province, BCTFA or any other Relevant Authority from carrying out any function or duty that it is required by Laws to carry out in respect of the Project Infrastructure or the Project Site.

“**Encumbrance**” means any mortgage, lien, pledge, judgment, execution, charge, security interest, restriction, covenant, restrictive covenant, easement, right of way, encroachment, condition, right of re-entry, lease, licence, permit to use or occupy land, crossing agreement (excluding railway crossing agreements), assignment, option, right to acquire, right of first refusal or pre-emption, trust, title defect, claim or encumbrance of any nature whatsoever, whether registered or registrable, and whether or not created by statute.

“**Engagement Events**” has the meaning given in Section 2.1(k)(i) of Schedule 9 [Communications and Engagement].

“**Enquiry-Response**” means the process by which the Design-Builder will receive and respond to general public and Stakeholder enquiries, suggestions and complaints with respect to the Project, and the Design-Builder’s electronic tracking system of all such enquiries, in accordance with Schedule 9 [Communications and Engagement].

“**Environmental Assessment Application**” means the application, including submissions, to obtain the Environmental Assessment Certificate.

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“**Environmental Assessment Certificate**” means environmental assessment certificate #T08-02 issued pursuant to the *Environmental Assessment Act* (British Columbia) on July 24, 2008, as attached as Part 1 [Environmental Assessment Certificate] to Appendix A to Schedule 6, and as amended, supplemented or replaced from time to time.

“**Environmental Authority**” means a Governmental Authority exercising its authority under Environmental Laws.

“**Environmental Enhancement Management Plan**” means the plan prepared by the Design-Builder in accordance with Section 2.7 [Environmental Enhancement Management Plan] of Schedule 6.

“**Environmental Laws**” means:

- (a) all requirements and provisions under or prescribed by any and all applicable Laws;
- (b) all applicable rules, regulations, orders-in-council, codes, protocols, guidelines, policies, procedures, concessions, grants, franchises, licences, permits, approvals, plans, authorizations, agreements and any other governmental requirements, in each case promulgated under or pursuant to any Laws; and
- (c) all applicable judicial, administrative or regulatory judgments, orders, decisions, certificates and exemptions, including those rendered by any Governmental Authority;

all as may be amended from time to time, relating to environmental assessment, the protection of the natural environment, the protection of plant, animal and human health, and the protection of land, water and air resources, including those relating to occupational health, management of waste, safety and transportation of dangerous goods, and the safety requirements and procedures that would, in the ordinary and usual course of the construction, operation, management, repair, maintenance and rehabilitation of similar facilities in British Columbia by any person, be recognized, followed and implemented by such person, and includes the *Canadian Environmental Protection Act* (Canada), the *Fisheries Act* (Canada), the *Transportation of Dangerous Goods Act* (Canada), the *Canada Water Act* (Canada), and the *Environmental Management Act* (British Columbia).

“**Environmental Manager**” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

“**Environmental Quality Management Plan**” or “**EQMP**” means the plan for the quality management of the Design-Builder’s Environmental Obligations prepared by the Design-Builder in accordance with Appendix E [Environmental Quality Management Plan] to Schedule 7.

“**Escrow Agreement**” means the documents escrow agreement dated as of September 17, 2019 among the Province, Pacific Gateway Constructors and Miller Thomson LLP, as escrow agent, as amended, supplemented or replaced from time to time.

“**Excluded Event**” means a Traffic Disruption Event that is:

- (a) directly attributable to a Province Non-Excusable Event;

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- (b) directly attributable to a Police Incident not caused or permitted to occur by the Design-Builder;
- (c) directly attributable to a Non-Police Incident of less than 30 minutes' duration not caused or permitted to occur by the Design-Builder;
- (d) directed by a Governmental Authority having jurisdiction, in response to some event or circumstance not caused or permitted to occur by the Design-Builder;
- (e) directed by the Province, in response to some event or circumstance not caused or permitted to occur by the Design-Builder;
- (f) directly attributable to a Compensation Event;
- (g) required solely to permit the conduct of work by or on behalf of a Utility Supplier, other than Utility Work;
- (h) directly attributable to, and resulting unavoidably from, a Latent Defect;
- (i) directly attributable to any Special Event specified by the Province and of the duration required by the Province; or
- (j) directly attributable to a Flood, but only during the period while the Project Site or portion thereof is submerged as a result of such Flood.

“Existing Contamination” means any Contamination that is situated in, on, under or over, or affects:

- (a) any parcel of Project Lands; or
- (b) any Infrastructure or other improvements on or to any parcel of Project Lands,

on the day immediately preceding the Handover Date for such parcel.

“Expert Panel” has the meaning given in Section 3.2 [Expert Panel] of Schedule 16.

“Expert Panel Dispute Notice” has the meaning given in Section 3.1 [Referral to Expert Panel] of Schedule 16.

“Expert Panel Member Agreement” has the meaning given in Section 3.2(d) of Schedule 16 [Dispute Resolution Procedure].

“Expert Referee” has the meaning given in Section 2.1 [Referral to Expert Referee] of Schedule 16.

“Expert Referee Dispute Notice” has the meaning given in Section 2.1 [Referral to Expert Referee] of Schedule 16.

“Expert Referee Agreement” has the meaning given in Section 2.2 [Expert Referee Agreement] of Schedule 16.

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“**Extensible Reinforcement**” means reinforcement elements that are within the soil for mechanically stabilized earth walls and are subject to long term creep, including geogrids.

“**External Quality Audit**” means either or both:

- (a) a second party Quality Audit conducted by parties having an interest in the relevant organization, such as customers; and
- (b) a third party Quality Audit conducted by an external independent organization such as a certification or registration body.

“**Factual Geotechnical Data**” means the data identified as “Factual Geotechnical Data” in Appendix B [Factual Geotechnical Data] to this Schedule.

“**Federal Government**” means Her Majesty the Queen in right of Canada.

“**Final Deficiency List**” has the meaning given in Section 6.5(b) of Part 3 [Design and Certification Procedure] of Schedule 4.

“**Final Deficiency List Deficiency**” means a defect or deficiency specified in the Final Deficiency List.

“**Final Design**” means the designs for all disciplines consisting of the relevant TAF(s) together with all final Design drawings, Design Certificates, supporting Design Data and calculations.

“**Financial Submittal Date**” means September 17, 2019.

“**Fiscal Quarter**” means each quarter of each Fiscal Year ending on June 30, September 30, December 31 and March 31.

“**Fiscal Year**” means each period during the Term commencing April 1 and ending March 31.

“**Fisheries Authorizations**” means all authorizations required to be obtained (whether in the name of the Design-Builder or the Province) under any provisions of the *Fisheries Act* (Canada) in respect of the Project and the Project Work.

“**Flood**” means waves, tides, tidal waves, and the rising of, breaking out or the overflow of any body of water, whether natural or man made, whether or not caused by or attributable to an earthquake.

“**FOIPPA**” means the *Freedom of Information and Protection of Privacy Act* (British Columbia).

“**Footing**” means the portion of the Substructure resting on the ground.

“**Force Majeure Event**” means any of the following events or circumstances:

- (a) war, hostilities (whether declared or undeclared), invasion, revolution, armed conflict, act of foreign enemy or terrorism;
- (b) pressure waves caused by aircraft or other aerial devices travelling at sonic or supersonic speeds;

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- (c) nuclear explosion, combustion of nuclear fuel or ionizing radiation;
- (d) riot or civil commotion (other than riot or civil commotion constituting a Protest Action); and
- (e) governmental expropriation or confiscation of property by the Federal Government, to the extent that such expropriation or confiscation does not result in a breach by the Province of Section 2.5(a)(i) or Section 2.5(c).

“Foundation” means the structure required to transfer load from a pier or abutment into the supporting soils, including pile caps, pile footings, caissons and drilled shafts.

“Full Closure” means a Closure affecting all of the lanes in one or both travelling directions within Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road.

“GAAP” means, with respect to any entity at any time, generally accepted accounting principles approved by the Canadian Institute of Chartered Accountants, or any successor institute, as applicable to that entity at that time in accordance with generally accepted accounting principles, as such principles may be amended or varied by International Financial Reporting Standards then in effect in Canada.

“General Project Work Defect Warranty Period” means the period from the Substantial Completion Date to and including the second anniversary of the Substantial Completion Date or, if earlier, the second anniversary of the Termination Date, provided that the General Project Work Defect Warranty Period shall be extended for one additional year for all work required of the Design-Builder to correct any Project Work Defect completed in the last year of the General Project Work Defect Warranty Period pursuant to Section 2.1 [Project Work Defect Warranty] of Schedule 5, such that the General Project Work Defect Warranty Period for any such item of remedial work shall extend for an additional year after such Project Work Defect is corrected.

“Geotechnical Engineer” means a Professional Engineer specializing in geotechnical matters.

“Good Industry Practice” means the exercise of that degree of skill, diligence, prudence and foresight that would reasonably and ordinarily be expected from a person, skilled and experienced in any of the design or construction of bridges and roads similar in type to the Project Facilities, seeking in good faith to comply with all applicable Laws and the same contractual obligations as the contractual obligations of the Design-Builder under this Agreement and under the same or similar circumstances and conditions.

“Governmental Authority” means:

- (a) the Province;
- (b) the Federal Government;
- (c) the Port Authority; and

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- (d) any other:
- (i) federal, provincial, territorial, regional, municipal or local governmental authority, quasi-governmental authority, Court, government organization, commission, board or tribunal;
 - (ii) regulatory, administrative or other agency; or
 - (iii) political or other subdivision, department or branch of any of the foregoing;

having jurisdiction in any way over or in respect of any aspect of the performance of this Agreement or the Project Work, or the Project Site or the Project Infrastructure.

“**GST**” means the goods and services tax imposed pursuant to Part IX of the *Excise Tax Act* (Canada), and any successor or replacement tax therefor.

“**Guardrail**” means a barrier fastened to the edge of a Bridge Deck to prevent vehicles from running over the side of the Bridge.

“**Handover Date**” means, in respect of a parcel of Project Lands, the date such parcel is made available to the Design-Builder as provided in Section 1.3 [Commencement of Access to Project Site] of Schedule 8.

“**Hazardous Substance**” means any hazardous waste, hazardous product, hazardous substance, contaminant, toxic substance, deleterious substance, dangerous good, pollutant, waste, hazardous waste, reportable substance, and any other substance, in respect of which the storage, manufacture, handling, disposal, treatment, generation, use, transport, remediation or Release into or presence in the environment is prohibited, controlled or regulated under Environmental Laws including:

- (a) oil, flammable substances, explosives, radioactive materials, hazardous wastes or “substances, toxic wastes or toxic substances or any other contaminants or pollutants;
- (b) any such substance which may or could pose a hazard to any real property, or to persons on or about any real property, or causes any real property to be in violation of any Environmental Laws, including any mixing or combination of any such substance with any other such substance that would cause a breach of any applicable Environmental Laws;
- (c) asbestos in any form which is or could become friable, radon gas, urea formaldehyde foam insulation, transformers or other equipment which contain dielectric fluid containing levels of polychlorinated biphenyls in excess of limits prescribed by any Environmental Laws; and
- (d) any such substance defined as or included in the definitions of “dangerous goods”, “deleterious substance”, “hazardous substances”, “hazardous wastes”, “hazardous materials”, “extremely hazardous wastes”, “restricted hazardous waste”, “toxic substances”, “special waste”, “waste” or words of similar import under any applicable Environmental Laws, including the *Canadian Environmental Protection Act* (Canada), the *Fisheries Act* (Canada), the *Transportation of Dangerous Goods Act* (Canada), the *Canada Water Act* (Canada) and the *Environmental Management Act* (British Columbia), including the Hazardous Waste Regulation promulgated thereunder.

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“**Health and Safety Laws**” means all Laws relating to occupational health and safety, including the WCA and the OHS Regulation.

“**Health and Safety Program**” has the meaning given in Section 4.13 [Health and Safety Program].

“**Holding Company**” means, with respect to a corporation, another corporation of which the first mentioned corporation is a “subsidiary” within the meaning of “subsidiary” as defined in the *Business Corporations Act* (British Columbia) as at the Effective Date.

“**Identified Indigenous Groups**” means Cowichan Tribes, Halalt First Nation, Katzie First Nation, Kwantlen First Nation, Kwikwetlem First Nation, Lake Cowichan First Nation, Lyackson First Nation, Musqueam Nation, Penelakut Tribe, Semiahmoo First Nation, Stz’uminus First Nation, Tsawwassen First Nation and Tsleil-Waututh Nation..

“**Impacted Drainage Area**” has the meaning given in Section 7.2(b)(ii) of Part 2 [Design and Construction Requirements] of Schedule 4.

“**Implementation Plan**” means the sub-plan of the Traffic Management Plan described in Section 7.2.3 [Implementation Plan] of Part 4 of Schedule 4.

“**Incident**” means any motor vehicle collision, motor vehicle breakdown or parking, flooding, Release of a Hazardous Substance, Debris, Emergency or other unplanned event or circumstance of any nature whatsoever occurring on, over, across or in relation to the Project Infrastructure that results in the potential occurrence or the occurrence of a Closure.

“**Incident Management Plan**” means the sub-plan of the Traffic Management Plan described in Section 7.2.2 [Incident Management Plan] of Part 4 of Schedule 4.

“**Independent Engineer**” means the entity appointed by the Province from time to time.

“**Independent Quality Audit**” has the meaning given in Section 4.7(a) of Schedule 7 [Quality Management].

“**Independent Quality Auditor**” has the meaning given in Section 4.7(b) of Schedule 7 [Quality Management].

“**Indigenous Contracting and Employment Coordinator**” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

“**Indigenous Participation Plan**” has the meaning given in Section 1.2 [Indigenous Participation Plan] of Schedule 22.

“**Indigenous Requirements**” has the meaning given in Section 1.1 [General Requirements] of Schedule 22.

“**Infrastructure**” means all road and highway infrastructure including Structures, roadways, hard shoulders, slip roads, side roads, access roads, pavement, bridges, tunnels and other highway structures, whether over or under the travelled surface, together with all related supporting infrastructure, buildings,

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improvements and amenities, including all intelligent traffic systems, fences and barriers, curbs, culverts, drainage systems including outfalls and balancing ponds, grassed areas, hedges and trees, planted areas, footways, road markings, road traffic signs, road traffic signals, road lighting, communications installations, weigh stations, washrooms and rest areas, picnic sites, pullouts, embankments, retaining walls and cuttings.

“**Initiating Party**” has the meaning given in Section 3.1 [Referral to Arbitration] of Schedule 16.

“**Inspection and Test Plan**” or “**ITP**” means a detailed spreadsheet of all major on and off Project Site inspection and test activities for Project Work performed by the Design-Builder and that of its Subcontractors.

“**Intellectual Property**” means all forms of intellectual property whatsoever including all access codes, algorithms, application programming interfaces (APIs), apparatus, circuit designs and assemblies, concepts, data, databases and data collections, designs, diagrams, documentation, drawings, equipment designs, flow charts, formulae, ideas and inventions (whether or not patentable or reduced to practice), IP cores, know-how, materials, marks (including trade marks, trade names, brand names, product names, logos and slogans), methods, models, net lists, network configurations and architectures, procedures, processes, protocols, schematics, semiconductor devices, software code (in any form including source code and executable or object code), specifications, subroutines, techniques, test vectors, tools, uniform resource identifiers including uniform resource locators (URLs), user interfaces, web sites, works of authorship, and other forms of technology.

“**Intellectual Property Rights**” means all past, present and future rights, including of the following types, which may exist or be created under the laws of any jurisdiction in the world in respect of any Intellectual Property:

- (a) rights associated with works of authorship, including exclusive exploitation rights, copyrights, moral rights, industrial design, integrated circuit topography and mask work rights;
- (b) trade mark and trade name rights and similar rights;
- (c) trade secret rights;
- (d) patent and industrial property rights;
- (e) other proprietary rights in Intellectual Property of every kind and nature; and
- (f) rights in or relating to registrations, renewals, extensions, combinations, divisions and reissues of, and applications for, any of the rights referred to in paragraphs (a) through (e) above.

“**Interchange Ramp**” has the meaning given in Section 4.1(a) of Part 4 [Traffic Management] of Schedule 4.

“**Interested Parties**” means those persons who may be affected by the carrying out of the Project Work or who are duly authorized by Laws to review or otherwise take an interest in the Project Work, including the Relevant Authorities.

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“**Interim Design**” means an interim design for a component of the Project Work produced by the Design-Builder in accordance with Article 2 [Design Submissions, Review and Reports] of Part 3 of Schedule 4.

“**Internal Quality Audit**” means a first party Quality Audit of an organization’s own processes conducted by or on behalf of the organization.

“**Irrecoverable Losses**” means:

- (a) in the case of Losses suffered or incurred by the Province, Province Irrecoverable Losses; and
- (b) in the case of Losses suffered or incurred by the Design-Builder, the Design-Builder Irrecoverable Losses.

“**Irrevocability Agreement**” means the irrevocability agreement entered into as of September 17, 2019 among the Province, Pacific Gateway Constructors, Ledcor CMI Ltd., Aecon Infrastructure Management Inc. and BEL Contracting, a division of BelPacific Excavating and Shoring LP, as amended, supplemented or replaced from time to time.

“**ISO 9000:2015 Standard**” means the ISO 9000:2015 International Standard, Quality Management Systems – Fundamentals and Vocabulary, as revised and updated from time to time, or, at the direction of the Province, such other replacement standard as the Province may designate, acting reasonably.

“**ISO 9001:2015 Standard**” means the ISO 9001:2015 International Standard, Quality Management Systems - Requirements, as revised and updated from time to time, or, at the direction of the Province, such other replacement standard as the Province may designate, acting reasonably.

“**ISO 9001 Lead Auditor Course**” means a accredited ISO 9001 course for lead auditors that meets the training portion of the requirements for current certification of individual quality system auditors with the International Register of Certified Auditors.

“**ISO 9004:2009 Standard**” means the ISO 9004:2009 International Standard, Quality Management Systems – Guidelines for Performance Improvements, as revised and updated from time to time, or, at the direction of the Province, such other replacement standard as the Province may designate, acting reasonably.

“**ISO 14001:2015 Standard**” means the ISO 14001:2015 International Standard – Environmental Management Systems – Requirements with Guidance for Use, as revised and updated from time to time, or, at the direction of the Province, such other replacement standard as the Province may designate, acting reasonably.

“**ISO 19011:2018 Standard**” means the ISO 19011:2018 International Standard, Guidelines for Quality and/or Environmental Management Systems Auditing, as revised and updated from time to time, or, at the direction of the Province, such other replacement standard as the Province may designate, acting reasonably.

“**TTS Equipment**” has the meaning given in Section 12.2 [ITS Equipment] of Part 2 of Schedule 4.

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“**Key Individuals**” means the individuals specified by the Design-Builder in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], as changed from time to time in accordance with Sections 3.3(b) and (c) of Schedule 2 [Representatives, Review Procedure and Consent Procedure].

“**Labour Dispute**” means any lawful or unlawful strike (including a general strike in British Columbia), lockout, go-slow or other labour dispute occurring after the Effective Date affecting generally the whole or a significant section of the highway construction industry in British Columbia and/or the highway operation and maintenance industry in British Columbia.

“**Land Identification Drawings**” means the drawing entitled 0410-01 08900-H9117-20181115-Highway 9117 Project Identification Drawings_DWG_43420-01.pdf contained on the USB drive attached as Appendix C [Land Identification Drawings] to Schedule 8.

“**Land Identification Sheets**” means the PDF version of the Land Identification Drawings.

“**Land Rights**” means an estate or interest in or right over or relating to any land (including an air space parcel, foreshore and land covered by water) whether legal, equitable, contractual, irrevocable, revocable, permanent, temporary or otherwise including a fee simple interest, subsurface rights, a leasehold estate, a statutory right of way, an easement, a license, rights under a crossing agreement, including a railway crossing agreement, or a permit.

“**Lane Closure**” means any Closure affecting a lane or lanes within Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road, but excludes a Full Closure.

“**Lane Shift**” means a transfer of traffic along lane(s) of the same route and which, using existing roadway lanes or surfaces, guides traffic around the work zone.

“**Latent Defect**” means any defect in any Original Project Infrastructure (provided that at the time of the discovery of such defect the Original Project Infrastructure containing such defect has not been disturbed by the carrying out of the Project Work by the Design-Builder (other than only to the extent such disturbing is necessary to discover the existence, nature and extent of such defect), the onus of establishing which shall be on the Design-Builder) existing as at the Effective Date which the Design-Builder is not aware of as at the Effective Date, and which could not reasonably have been discovered, ascertained or anticipated as at the Effective Date by a competent person acting in accordance with Good Industry Practice during a visual examination of the Original Project Infrastructure on or before the Financial Submittal Date (including the Disclosed Data as it exists as at the Financial Submittal Date) having regard to the opportunity afforded the Design-Builder to conduct such inspection, examination and analysis before the Financial Submittal Date.

“**Latent Project Work Defect**” has the meaning given in Section 2.2(b) of Schedule 5 [Project Work Defects and Warranties].

“**Laws**” means all laws (including the common law), statutes, regulations, treaties, judgments and decrees and all official directives, bylaws, rules, consents, approvals, authorizations, guidelines, orders and policies of any Governmental Authority having the force of law from time to time affecting, applicable to or otherwise relating to the Project, the Project Work, the Project Site, the Project Infrastructure, the Design-Builder, the Province or BCTFA, as the case may be, including, for greater certainty, those related to the issuance of Permits and any applicable building codes.

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“**Licensed Property**” means any Intellectual Property or other property to which the Complete License applies.

“**Losses**” means any and all damages, losses, loss of revenue, loss of profit, loss of business opportunity, liabilities, charges, judgments, court orders, penalties, fines, assessments, costs (including finance costs) and expenses (including legal and other professional charges and expenses on a full indemnity basis and including reasonable costs of mitigation incurred by the Province in complying with its obligations pursuant to Section 3.1 [Mitigation by Province] or the Design-Builder in complying with its obligations pursuant to Section 4.10 [Mitigation by the Design-Builder], as the case may be) of any nature and kind whatsoever and howsoever arising, whether under statute or contract, at common law, in equity, in connection with judgments or criminal or quasi criminal proceedings, or otherwise, and whether direct, indirect or consequential, and “**Loss**” will be construed accordingly.

“**Major Culverts**” means structures 3 metres or more in diameter or span constructed of various materials (typically corrugated iron) and required to convey watercourses under the highway.

“**Major Drainage**” has the meaning given in Section 1010.03 of the BC Supplement to TAC.

“**Major Retaining Wall**” means a structure whose purpose is to structurally retain earth and which are inventoried as Structures by the Ministry when the wall face is greater than 45 degrees and the maximum exposed wall height exceeds 2.0m, with the primary purpose of the structure not being to support Bridge abutments and rock fall or avalanche catchments.

“**Major Sign Structures**” means overhead sign support structures typically of truss construction with the horizontal members either supported at both ends or cantilevered over the Travelled Lanes.

“**Mark-up**” means any direct or indirect margin, mark-up, overhead charge, premium or other increase over or above the actual amount incurred for salary, wages, machinery, equipment, tools or any other input.

“**Material Subcontract**” means an agreement between the Design-Builder and one or more Material Subcontractors for or relating to the provision of all or part of the Project Work, each as amended, supplemented or replaced from time to time in accordance with this Agreement.

“**Material Subcontractor**” means, as of the Effective Date, the Designer, and any other person that enters into a Subcontract with the Design-Builder following the Effective Date having a contract value of \$10,000,000 or greater, and any substitute contractor for any such contractor engaged directly by the Design-Builder as may be permitted by this Agreement.

“**Minimum Indigenous Contracts Requirement**” has the meaning given in Section 1.1(b) of Schedule 22 [Indigenous Requirements].

“**Minimum Indigenous Employment Requirement**” has the meaning given in Section 1.1(a) of Schedule 22 [Indigenous Requirements].

“**Minimum Traffic Performance Criteria**” has the meaning given in Section 1.5.1 [General Requirements] of Part 2 of Schedule 4.

“**Minister**” means the member of the Executive Council of the Province who is charged from time to time with the administration of the *Transportation Act* (British Columbia), and includes the Minister’s deputy

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and any person authorized to act for or on behalf of either of them with respect to any matter under or contemplated by this Agreement.

“**Ministry**” means the ministry of the Province headed by the Minister.

“**Ministry Standards**” means all standards and specifications referred to or identified in Schedule 4 [Design and Construction] or elsewhere in this Agreement, including the Reference Documents, issued or adopted by the Province as applicable generally to the design, construction of roads, highways, Bridges and related Structures, systems and improvements, or specifically to the Project Work or to all or any parts or components of the Project Infrastructure and the Project Site, in each case as at the Effective Date or as subsequently amended or revised after the Effective Date.

“**Minor Works**” has the meaning given in Section 7.3 [Minor Works].

“**Minor Works Valuation**” means a reasonable estimate, consistent with the principles set out in Section 2.4 [Valuation of Change in Costs] of Schedule 11, of the net amount of all Changes in Costs incurred by the Design-Builder to implement a Province Change or the Design-Builder Proposal.

“**Modifications**” means, in respect of any Intellectual Property or other property, all modifications including any alterations, changes, deletions, amendments, upgrades, updates, enhancements, revisions or improvements.

“**Modifications to Province Provided Materials**” means all Modifications made to any Province Provided Materials, whether made by or on behalf of the Province or by or on behalf of the Design-Builder.

“**MOE**” means the Ministry of Environment and Climate Change Strategy of the Province.

“**Motor Vehicle**” means a motor vehicle as defined in the *Motor Vehicle Act* (British Columbia).

“**Multiplate**” means a steel culvert three metres or more in diameter, fully or partially factory assembled or field assembled by bolting together a number of corrugated steel plates and provided that, when less than three metres in diameter, it shall be considered to be a culvert.

“**Municipal Agreement**” means the agreement to be entered by the City of Delta and the Province, as amended, supplemented or replaced from time to time.

“**Municipality**” means the City of Delta.

“**NCE (Cash) Payment**” means a payment paid or payable pursuant to Section 4.3 [Calculation of Non-Compliance Event Payments] of Schedule 10 in respect of the occurrence of one or more Non-Compliance Events as described in:

- (a) Section 3.3(f)(i) of Schedule 2 [Representatives, Review Procedure and Consent Procedure]; and
- (b) Section 1.5(b)(iii) of Schedule 22 [Indigenous Requirements].

“**NCE Points**” means those points assigned to the Design-Builder in accordance with Section 5.1 [Assignment of NCE Points] of Schedule 10.

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“**NCE Points Balance**” has the meaning given in Section 5.2(b)(ii) of Schedule 10 [Performance Mechanism].

“**NCE Points (Default) Balance**” has the meaning given in Section 5.3(b) of Schedule 10 [Performance Mechanism].

“**NCE (Points) Payment**” means a payment paid or payable pursuant to Section 4.3 [Calculation of Non-Compliance Event Payments] of Schedule 10 in respect of NCE Points assigned to the Design-Builder pursuant to Part 5 [NCE Points and Default Points] of Schedule 10 in respect of the occurrence of one or more Non-Compliance Events.

“**New Project Infrastructure**” at any time means the Infrastructure (including Original Project Infrastructure) situated in, on, under or over any part of the Project Lands during the Access Period for such part of the Project Lands, as such Infrastructure is constructed, installed, altered, upgraded and augmented at that time by the carrying out of the Project Work, including both new Infrastructure and altered, upgraded and/or augmented Infrastructure, but excluding Utilities of Utility Suppliers and Third Party Facilities.

“**Non-Compliance Event**” or “**NCE**” means:

- (a) a failure by the Design-Builder to meet a specific performance measure described in Appendix D [Assignment of NCE Points] to Schedule 10;
- (b) a failure by the Design-Builder to retain, make available or replace any Key Individual, or to fill any Key Individual position, as required by Section 3.3 [Key Individuals] of Schedule 2; or
- (c) a failure by the Design-Builder to meet the Minimum Indigenous Contracts Requirement as required by Section 1.1(b) of Schedule 22 [Indigenous Requirements].

“**Non-Compliance Event Payments**” means the payments paid or payable by the Design-Builder to the Province pursuant to Section 4.3 [Calculation of Non-Compliance Event Payments] of Schedule 10.

“**Nonconformity**” means any failure by the Design-Builder to perform any of its obligations under this Agreement in respect of any aspect of the Project Work and which failure is not rectified by the Design-Builder within the applicable time period, if any, stipulated in this Agreement, including but not limited to the following:

- (a) a Non-Compliance Event;
- (b) defective workmanship or repairs not in compliance with the requirements of this Agreement;
- (c) use of materials and/or equipment not in compliance with the requirements of this Agreement;
- (d) deficient, incomplete and/or illegible Quality Documentation;
- (e) deficient, incomplete and/or illegible Records;

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- (f) inadequate and/or ineffective defect identification processes;
- (g) failure to achieve documented response time requirements;
- (h) failure to comply with Quality Management System processes;
- (i) failure to complete a Correction of a Nonconformity and, if applicable, failure to take Corrective Action in respect of any Nonconformity, within the required time;
- (j) failure to take Opportunities for Improvement (if applicable) with respect to any potential Nonconformity within the required time; and
- (k) failure to meet the Design-Builder's reporting obligations under this Agreement.

“Nonconformity Report” means a document issued by either the Province or the Design-Builder pursuant to Section 6.1 [Nonconformity Reporting Process] of Schedule 7 detailing the description of an identified Nonconformity and the proposed rectification and action taken or to be taken to deal with such Nonconformity.

“Nonconformity Tracking System” means a system to track Nonconformity Reports issued by the Province or the Design-Builder as set out in Section 6.2 [Nonconformity Report Tracking System] of Schedule 7.

“Non-Default Termination Sum” has the meaning given in Section 1.2 [Calculation of Non-Default Termination Sum] of Schedule 13.

“Non-Foreseeable Contamination” means all Existing Contamination other than Existing Contamination that is disclosed by, or could reasonably have been foreseen from an analysis of or interpreting, any field test data, investigations, studies and/or reports (for the purposes of this definition, **“Analytical Information”**) contained in the Disclosed Data (excluding any Analytical Information that is located or disclosed in the Data Room solely by way of links to external websites) as at the Financial Submittal Date to the extent contained in any of the following included in the Data Room:

- (a) a Phase 1 or Phase 2 Environmental Site Assessment in accordance with Standard CAN/CSA-Z768-01;
- (b) a Stage 1 or Stage 2 Preliminary Site Investigation in accordance with the MOE Technical Guidance Document No. 10 entitled “Checklist for Reviewing a Preliminary Site Investigation” dated October 2005;
- (c) any hazardous materials assessments and surveys for buildings; and/or
- (d) any other field test data, or investigations, studies and/or reports associated with such data, disclosed in the Data Room.

“Non-Permitted Traffic Disruption Event” means a Traffic Disruption Event described in any of Sections 2.7 [Non-Permitted Traffic Disruption Events on Highway 91, Highway 17 and Highway 99], 3.6 [Non-Permitted Traffic Disruption Events on Highway 91C], 4.6 [Non-Permitted Traffic Disruption Events on Interchange Ramps], 5.6 [Non-Permitted Traffic Disruption Events on Other Specified Roads] or 6.6 [Non-Permitted Traffic Disruption Events on River Road] of Part 4 of Schedule 4.

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“**Non-Police Incident**” means an Incident as a result of which the Police do not require closure of all or part of Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road.

“**No Threshold Compensation Event**” means each of the Compensation Events referred to in paragraphs (a), (b), (e), (g), (h), (i), (j), (k), (m), (n) or (p) of the definition of Compensation Event in this Section 1.1.

“**Notice of Intention to Terminate**” has the meaning given in Section 14.4(a).

“**Notice of Objection to Arbitration**” has the meaning given in Section 4.1(a)(i) of Schedule 16 [Dispute Resolution Procedure].

“**Notice of Objection to Expert Referee**” has the meaning given in Section 2.1 [Referral to Expert Referee] of Schedule 16.

“**OEEA**” means the Overview Environmental Effects Assessment for the Project dated September 2019 and as amended, supplemented or replaced from time to time.

“**OHS Regulation**” means the *Occupational Health and Safety Regulation* (British Columbia) promulgated pursuant to the WCA.

“**Operation and Maintenance**” has the meaning given in Section 5.1 [Responsibility for Operation and Maintenance – General] of Part 1 of Schedule 4.

“**Operation and Maintenance Plan**” has the meaning given in Section 5.6 [Operation and Maintenance Plan] of Part 1 of Schedule 4.

“**Opportunities for Improvement**” means a situation or condition where actions can be taken by the Design-Builder to enhance its performance in the delivery of products or services or to eliminate the causes of a potential Nonconformity or other undesirable situation in order to prevent its occurrence.

“**Original Project Infrastructure**” means Infrastructure situated in, on, under or over any parcel of Project Lands at the Handover Date for such parcel, but excludes Utilities of Utility Suppliers and Third Party Facilities.

“**Other Land**” means any land other than the Project Lands.

“**Other Specified Road**” has the meaning given in Section 5.1(a) of Part 4 [Traffic Management] of Schedule 4.

“**Overhead**” means a Bridge carrying a highway over either a railway or a railway and another facility.

“**Overpass**” means a grade separated Structure carrying a highway over a road, a highway, a railway or a watercourse.

“**Owner’s Engineer**” means R.F. Binnie & Associates Ltd., or any replacement appointed by the Province from time to time.

“**Participants**” has the meaning given in Section 8.8(a).

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“**parties**” means the parties to this Agreement unless reference is made specifically to another agreement or document.

“**Partners**” means CMI-HWY 91 Limited Partnership, Aecon Infrastructure Management Inc. and BelPacific Excavating & Shoring Limited Partnership.

“**Partnerships BC**” means Partnerships British Columbia Inc.

“**Pavement Marking**” means a retro-reflective mechanism such as paint used to delineate a profile, such as a road.

“**Payment Application**” means a payment application in the applicable form set out in Appendix E [Payment Application Forms] to Schedule 10, and includes a Draw Request.

“**Payment Period**” means each calendar month, provided that:

- (a) the first Payment Period shall commence on the Effective Date and end on the last day of the calendar month following the calendar month in which the Effective Date occurs; and
- (b) the last Payment Period shall end on the last day of the calendar month in which the Total Completion Date occurs.

“**Performance Based Connection**” means an intersection, roundabout or interchange in respect of which the traffic engineering design criteria set out in Section 1.5.3 [Performance Criteria] of Part 2 of Schedule 4 are required to be met.

“**Performance Incentive Payments**” means, collectively, the payments paid or payable by the Design-Builder to the Province pursuant to Section 4.1 [Calculation of Performance Incentive Payments] of Schedule 10.

“**Permits**” means:

- (a) all permissions, consents, approvals, certificates, permits, licences, statutory agreements and authorizations required from any Governmental Authority; and
- (b) all necessary permissions, consents, approvals and agreements from any third parties;

needed to carry out the Project and the Project Work in accordance with this Agreement, including all such permissions, consents, approvals, certificates, permits, licences, statutory and other agreements and authorizations required under or pursuant to any other Permit, the Environmental Assessment Certificate, the Indigenous Requirements, the Requirements of Interested Parties, any Project Site Agreement or any Project Site Encumbrance.

“**person**” means a legal entity, individual, corporation, body corporate, partnership, joint venture, association, trust, syndicate, limited liability company, pension fund, union or Governmental Authority, and the heirs, executors, administrators and legal representatives of an individual.

“**Personal Information**” means recorded information about an identifiable individual, other than contact information, collected or created by the Design-Builder as a result of this Agreement but excluding any

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such information that, if Schedule 23 [Privacy Protection] did not apply to it, would not be under the “control of a public body” within the meaning of FOIPPA.

“**Person Year**” means 2,080 hours of employment less vacation and statutory holiday entitlement.

“**Plant**” means plant, goods, products, commodities, materials, supplies, machinery, equipment, apparatus and other tangible property supplied by or on behalf of the Design-Builder:

- (a) intended to form part of the Project Infrastructure or actually forming part of the Project Infrastructure; or
- (b) intended to be incorporated into or permanently affixed to real property forming part of the Project Site or actually incorporated into or permanently affixed to real property forming part of the Project Site.

“**Police**” means any of:

- (a) the Royal Canadian Mounted Police;
- (b) any other provincial, federal, regional or municipal police force, police department or other law enforcement body and any related governing body having territorial jurisdiction over or in respect of the Project Infrastructure, the Project Site or any part thereof from time to time;
- (c) a member of the Royal Canadian Mounted Police or any other law enforcement body or related governing body referred to in paragraph (b) above; and
- (d) any other official who has or is exercising the powers of a constable or a peace officer while engaged in law enforcement duties, when those duties are exercised in relation to a matter in connection with, or which incidentally affects the construction or operation of, the Project Infrastructure, the Project Site or any part thereof from time to time.

“**Police Incident**” means any Incident as a result of which the Police require closure of all or part of Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road.

“**Ponding**” means large puddles of water trapped on a Travelled Lane or Shoulder.

“**Port Authority**” means the Vancouver Fraser Port Authority.

“**Prime Contractor**” means a “prime contractor” as defined and described in the WCA and the OHS Regulation, respectively.

“**Prime Rate**” at any time means the variable rate of interest per annum announced from time to time by Canadian Imperial Bank of Commerce (or its successor) as such bank’s “prime” rate then in effect for determining interest rates on Canadian dollar commercial loans made by it in Canada.

“**Professional Engineer**” means a person who is registered as a professional engineer with the EGBC.

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“**Progress Amount**” has the meaning given in Section 2.1(a)(i) of Schedule 10 [Payment and Performance Mechanism].

“**Progress Payment**” means a progress payment for a Payment Period paid or payable by the Province pursuant to Section 1.1 [Obligation to make Progress Payments] of Schedule 10.

“**Project**” has the meaning given in Section 2.1 [The Project].

“**Project Documents**” means:

- (a) this Agreement;
- (b) the Bonds;
- (c) the Material Subcontracts;
- (d) the Proponent Agreement;
- (e) the Irrevocability Agreement; and
- (f) the Escrow Agreement,

and all other documents executed and delivered by or on behalf of the parties pursuant to Section 2.17 [Execution and Delivery of Project Documents] and Schedule 19 [Closing Deliveries].

“**Project Facilities**” at any time means:

- (a) the lands and interests in land described in Appendix A [Project Lands] to Schedule 8 that, before that time, have been made available to the Design-Builder as provided in Section 1.3 [Commencement of Access to Project Site] of Schedule 8, and excluding:
 - (i) any Temporary Land Rights that have terminated or expired; and
 - (ii) any Land Rights (other than fee simple interests) that have been terminated; and
- (b) the Project Infrastructure at that time.

“**Project Infrastructure**” at any time means the Original Project Infrastructure at that time and the New Project Infrastructure at that time.

“**Project Intellectual Property**” means all Intellectual Property, whether complete or not, and all Intellectual Property Rights therein, that is not Background IP or Third Party IP and which is created, brought into existence, acquired, licensed or used by the Design-Builder or any Subcontractor, directly or indirectly, for the Project Intellectual Property Purposes, including Work Product (as defined in the Proponent Agreement) and Design Data that is prepared by or on behalf of the Design-Builder and/or any of the Design-Builder’s agents, employees or Subcontractors, but specifically excluding Records, Construction Records, Province Provided Materials, Modifications to Province Provided Materials and Design Data provided or made available by or on behalf of the Province.

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“Project Intellectual Property Purposes” means the purpose of designing or constructing the New Project Infrastructure or otherwise for the purposes of the Project Work or this Agreement.

“Project Lands” means those lands and interests in lands identified as “Project Lands” on the Land Identification Drawings..

“Project Marks” has the meaning given in Section 2.16(a).

“Project Requirements” means all standards, specifications, procedures, design criteria, design and professional practice guidelines and other requirements applicable to the Project Work, including the Design, the Construction, and all other design activities and Construction, all as set out in this Agreement as at the Effective Date and as amended, supplemented or replaced from time to time after the Effective Date in accordance with this Agreement, and includes the Design and Construction Requirements.

“Project Schedule” means the schedule of the milestone dates for the Project Work set out in Appendix A [Project Schedule] to Schedule 3 as of the Effective Date, and as subsequently amended from time to time in accordance with Section 1.2 [Project Schedule] of Schedule 3.

“Project Site” at any time means any part of the Project Lands for which the Access Period is extant as at that time.

“Project Site Agreements” means any and all agreements and instruments setting out terms and conditions on which Land Rights in any parcel of Project Lands that are less than a fee simple interest are at any time, on or after the Effective Date, held by the Province or BCTFA, including:

- (a) Land Rights described in the column titled “Land Rights if other than a Fee Simple Interest or Highway” in Table A in Appendix A [Project Lands] to Schedule 8; and
- (b) the Railway Agreements,

and any amendments thereto.

“Project Site Encumbrances” means any and all Encumbrances from time to time charging, encumbering or affecting any lands comprising part of the Project Site on or after the Effective Date, and any amendments thereto, and including:

- (a) any such Encumbrances described in Appendix A [Project Lands] or Appendix B [Certain Project Site Encumbrances] to Schedule 8;
- (b) any such Encumbrances disclosed in the Disclosed Data;
- (c) any such Encumbrances registered in the Land Title Office against title to any lands comprising part of the Project Site;
- (d) any permit issued in replacement for a statutory right of way registered in the Land Title Office against title to any Project Lands that is cancelled on cancellation of a certificate of title in the Land Title Office for any parcel of Project Lands; and
- (e) any such Encumbrance that is a permitted Encumbrance (howsoever described) under or in respect of any agreement or instrument pursuant to which Land Rights in any part of

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the Project Site are, at any time, on or after the Effective Date, held by the Province or BCTFA.

“**Project Work**” means all activities of or required of the Design-Builder (and/or any of the Design-Builder’s employees and Subcontractors) in connection with the performance of any obligations of the Design-Builder under this Agreement, and the conduct of all work and operations of the Design-Builder (and/or any of the Design-Builder’s employees and Subcontractors) on or in relation to the Project, the Project Site and the Project Infrastructure including the Design, the Construction and the Reinstatement Work.

“**Project Work Defect**” has the meaning given in Section 1.2 [Project Work Defects] of Schedule 5.

“**Property Damage Insurance Proceeds**” has the meaning given in Section 6.18(b).

“**Proponent Agreement**” means the proponent agreement entered into as of January 4, 2019 among, *inter alia*, the Province, Pacific Gateway Constructors, Ledcor CMI Ltd., Aecon Infrastructure Management Inc., BEL Contracting, a division of BelPacific Excavating and Shoring LP and the Designer, as amended, supplemented or replaced from time to time.

“**Proposal**” means:

- (a) the technical submittal dated July 18, 2019; and
- (b) the financial submittal dated the Financial Submittal Date,

each submitted by the Preferred Proponent (as defined in the Request for Proposals) to the Province in response to the Request for Proposals, together with all amendments and supplements to such technical proposal and financial proposal.

“**Proposal Extracts**” means the extracts from the Proposal attached as Schedule 12 [Proposal Extracts].

“**Protest Action**” means any civil disobedience, protest action, riot, civil commotion, blockade or embargo, including any action taken or threatened to be taken, by any person or persons protesting or demonstrating against the carrying out of any part of the Project (including the construction of the Project Infrastructure) or against the construction or operation of highways in general, occurring after the Effective Date, but excluding any Labour Dispute or any other strike, lockout, industrial relations dispute or job action by, of or against workers carrying out any part of the Project Work.

“**Province**” has the meaning given in the Recitals.

“**Province Change**” means any of the following as initiated by the Province:

- (a) a variation in the design, quality or scope of the New Project Infrastructure or the Project Work, or in the Construction or any part thereof;
- (b) any other variation in the Project Requirements or this Agreement; or
- (c) any other matter which, by the terms of this Agreement, is stated to constitute a Province Change or in respect of which the provisions of Section 7.1 [Province Changes] are stated to be applicable.

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“**Province Default**” has the meaning given in Section 13.1 [Province Default].

“**Province Indemnified Persons**” means:

- (a) the Province’s Representative in its capacity as such under this Agreement;
- (b) BCTFA;
- (c) Partnerships BC;
- (d) any agent or professional advisor (including legal and financial advisors) of the Province or BCTFA (excluding the Design-Builder and any person for whom the Design-Builder is in law responsible); and
- (e) any director, officer or employee of the Province or BCTFA or of any person falling within paragraph (c) of this definition.

“**Province Irrecoverable Losses**” means:

- (a) any loss of revenue and loss of profits that might have been, or might be, obtained or received by the Province from the Project or a source other than the Project, including loss of revenue from the Project Facilities;
- (b) any loss of business opportunity or other loss of opportunity suffered by the Province with respect to a source other than the Project; and
- (c) Consequential Losses suffered by a third party, for which the Province or BCTFA is, pursuant to a contractual commitment entered into by the Province or BCTFA with such third party, liable to indemnify such third party (in this definition, an “**Province Contractual Commitment**”) where:
 - (i) the entering into by the Province or BCTA of the Province Contractual Commitment and the nature, scope, extent and terms of the indemnification provisions contained therein (including any liability of the Province or BCTFA in respect of Consequential Losses) were, at the time such Province Contractual Commitment was entered into, inconsistent with Past Practice, or otherwise outside the normal course of the customary activities of the Province or BCTFA, as the case may be, and unreasonable having regard to all relevant circumstances at the time; and
 - (ii) neither the Province nor BCTFA did any of the following:
 - (A) disclosed the Province Contractual Commitment in the Data Room on or before the Effective Date; or
 - (B) consulted with the Design-Builder or the Design-Builder’s Representative prior to entering into the Province Contractual Commitment in the case of a Province Contractual Commitment entered into after the Effective Date; or

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- (C) consulted with any Affiliate, agent or representative of the Design-Builder prior to entering into the Province Contractual Commitment in the case of a Province Contractual Commitment entered into prior to the Effective Date; and
- (iii) the Province Contractual Commitment was entered into for reasons other than the *bona fide* pursuit of:
 - (A) delivery and/or completion of the Project or any component of the Project;
 - (B) performance and/or completion of the Project Work or any of the Project Infrastructure; or
 - (C) furtherance of the Design-Builder's obligations in respect of the Project; and
- (iv) **"Past Practice"** refers to the customary practice of the Province or BCTFA at the time a Province Contractual Commitment is entered into, with respect to the nature, scope, extent and terms of indemnification provisions (including any liability of the Province or BCTFA in respect of Consequential Losses) contained in contractual arrangements entered into by the Province or BCTFA with arm's length third parties, having regard to the nature of the Province Contractual Commitment and all relevant circumstances at the time any such Province Contractual Commitment was entered into.

"Province Non-Excusable Event" means any of the following:

- (a) any wrongful act, wrongful omission, negligent act, negligent omission or wilful misconduct; or
- (b) any breach in the performance or observance of any of the Province's obligations under this Agreement or any other Province Project Document,

of or by the Province or any person for whom the Province is in law responsible.

"Province Payments" means, collectively, the payments paid or payable by the Province to the Design-Builder pursuant to Part 1 [Payment Obligations of Province] of Schedule 10.

"Province Permits" means the Permits listed in Appendix B [Province Permits] to Schedule 4.

"Province Project Documents" means this Agreement, the Proponent Agreement and the Irrevocability Agreement, the Escrow Agreement.

"Province Provided Materials" means any materials, documents, data (including Design Data provided or made available by or on behalf of the Province and the Disclosed Data) or other information, and any Intellectual Property Rights therein, provided by the Province or its representatives or any other person on behalf of the Province to or for the benefit of the Design-Builder or its representatives or to any Subcontractor or its respective representatives or any Proponent Team Member of the Preferred

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Proponent (as both such terms are defined in the Request for Proposals) for the Project Intellectual Property Purposes.

“**Province’s Representative**” means the person appointed by the Province pursuant to Section 1.1(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement or substitute as may be appointed by the Province pursuant to Section 1.2 [Change of Province’s Representative] of Schedule 2.

“**Province Subsequent Contamination**” means any Contamination, other than Existing Contamination, on any part of the Project Infrastructure or the Project Site that was caused by the Province or any person for whom the Province is in law responsible.

“**PST**” means the sales tax that is imposed pursuant to the *Provincial Sales Tax Act* (British Columbia), and any successor or replacement tax therefor.

“**Qualified Coordinator**” has the meaning given in Section 4.12(c)(i).

“**Qualified Environmental Professional**” means a person who is registered in good standing with a professional organization enabled under a Law of an appropriate field such as biology, ecology, geography, engineering, or natural resources management, and is required to follow a code of ethics issued by that professional organization.

“**Qualified Governmental Entity**” means any of the following:

- (a) the Province or any ministry or department of the Province;
- (b) any person having the legal capacity, power and authority to become a party to and to perform the obligations of the Province or, as the case may be, BCTFA, under this Agreement and the other Province Project Documents, the duties, obligations and liabilities of which are guaranteed and supported by the Province or any ministry or department of the Province;
- (c) the Federal Government provided it has the legal capacity, power and authority to become a party to and to perform the obligations of the Province or, as the case may be, BCTFA, under this Agreement and the other Province Project Documents; and
- (d) any person having the legal capacity, power and authority to become a party to and to perform the obligations of the Province or, as the case may be, BCTFA, under this Agreement and the other Province Project Documents, the duties, obligations and liabilities of which are guaranteed by the Federal Government or any ministry or department of the Federal Government.

“**Qualified Insurer**” means a reputable and duly qualified insurer of good standing in the worldwide insurance market, licensed to transact insurance business in Canada, rated A.M. Best A- or better or Standard & Poors Ratings Services, a division of the McGraw-Hill Companies, Inc. (in this definition, “**Standard & Poors**”) A or better, provided that:

- (a) if a rating from A.M. Best Company or Standard & Poors is not available, or if A.M. Best Company or Standard & Poors ceases to provide ratings for insurance companies, then having a rating equivalent to or better than the A.M. Best A- rating or the Standard &

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Poors A rating as at the Effective Date, from another rating agency of equivalent calibre that provides ratings of equivalent quality, all as agreed upon by the parties or, failing such agreement, as determined by the Dispute Resolution Procedure; or

- (b) if A.M. Best Company changes its A- rating or Standard & Poors changes its A rating, then having a rating equivalent to or better than the A.M. Best A- rating or the Standard & Poors A rating as at the Effective Date, from A.M. Best Company or Standard & Poors or another rating agency of equivalent calibre that provides ratings of equivalent quality, all as agreed upon by the parties or, failing such agreement, as determined by the Dispute Resolution Procedure.

“Qualified Professional Agrologist” means a registered professional agrologist in the Province of British Columbia with qualifications approved by the Agricultural Land Commission.

“Quality Audit” means a systematic, independent and documented process for obtaining audit evidence and evaluating it objectively to determine the extent to which audit criteria are fulfilled.

“Quality Audit Plans” means the Design-Builder’s audit plans defining the Internal Quality Audits and External Quality Audits that the Design-Builder shall perform or cause to be performed on its own processes and the processes of its Subcontractors.

“Quality Director” means the Key Individual identified by such title in Section 3.3(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure], or such replacement as may be designated by the Design-Builder pursuant to Section 3.3 [Key Individuals] of Schedule 2.

“Quality Documentation” means all documentation required in accordance with Schedule 7 [Quality Management] which together constitutes and describes the Quality Management System, including the Quality Manual, Quality Management Plans, Work Method Statements and Quality Audit Plans.

“Quality Management Plan” or **“QMP”** means each detailed quality management plan of the Design-Builder detailing which procedures and associated resources shall be applied by whom and when for each aspect of the Project Work required in accordance with this Agreement, including the Design Quality Management Plan, the Construction Quality Management Plan, the Traffic Quality Management Plan and the Environmental Quality Management Plan.

“Quality Management System” or **“QMS”** means the Design-Builder’s management system that establishes the organizational structure, procedures, processes, systems, management plans and resources for determining and achieving the Quality Policy in the performance of the Project Work in accordance with this Agreement.

“Quality Manual” means the Design-Builder’s quality manual meeting the requirements set out in Appendix A [Quality Manual] to Schedule 7 and:

- (a) outlining the Quality Management System for all aspects of the Project Work, and for the complete organization (including the Design-Builder and its Subcontractors) involved in performing the Project Work;
- (b) establishing Quality Policy and Quality Objectives; and

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- (c) outlining the means by which the Design-Builder shall establish, implement, control and continually improve processes to achieve that Quality Policy and those Quality Objectives.

“**Quality Objectives**” means the objectives related to quality that are measurable and consistent with the Quality Policy and which are to be formally expressed and recorded in the Quality Manual in accordance with Schedule 7 [Quality Management], provided that, alternatively, each Quality Management Plan may have its own Quality Objectives which are directly related to applicable Quality Policy expressed or recorded in the Quality Manual.

“**Quality Policy**” means the overall intentions and direction of the Design-Builder related to quality applicable to the overall organization (including the Design-Builder and its Subcontractors) involved in performing the Project Work which are to be formally expressed and recorded in the Quality Manual in accordance with Schedule 7 [Quality Management], provided that, alternatively, each Quality Management Plan may have its own Quality Policies which are directly related to applicable Quality Objectives expressed or recorded in the Quality Manual.

“**Quality Records**” has the meaning given in Section 5.8 [Quality Records] of Schedule 7.

“**Railway Agreements**” means any agreements entered into by the Province or BCTFA with a Railway and any Railway Orders granted or issued in favour of the Province or BCTFA allowing or providing for Infrastructure comprising or to comprise Project Infrastructure to be located upon or across Project Lands, and improvements thereon, that are Railway Lands, and the construction, maintenance and use of such Infrastructure upon and across such Railway Lands.

“**Railway Lands**” means Project Lands, and improvements thereon, that are owned or held by or under the control of a Railway.

“**Railway Order**” means an order of the Canadian Transportation Agency (or its predecessor the National Transportation Agency) or a certificate or order issued pursuant to the *Railway Act* (British Columbia) and/or the *Railway Safety Act* (British Columbia)

“**Railways**” means BNSF and CN Rail, and “**Railway**” means either one of them.

“**Records**” has the meaning given in Section 1.1 [Design-Builder Records] of Schedule 17 and includes Construction Records and Quality Records.

“**Records Management Protocol**” means the protocol developed by the Design-Builder pursuant to Section 1.3 [Records Management Protocol] of Schedule 17.

“**Recoverable Expenditures**” means expenditures incurred, directly or indirectly, by the Design-Builder, which expenditures:

- (a) relate to an asset that:
 - (i) has a physical existence; and
 - (ii) will generate benefits to be received in future years; and
- (b) are not recurring or routine.

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“**Reference Concept**” means the Reference Concept(s) as provided in the Data Room.

“**Reference Documents**” means the references, codes, standards, specifications, guidelines, policies, reports, publications, manuals, bulletins and other such documents listed in Appendix A [Reference Documents] to this Schedule, each as amended, supplemented or replaced from time to time in accordance with Section 1.2(b) of this Schedule.

“**Reinstatement Funds Deficiency**” has the meaning given in Section 8.7 [Termination for Damage or Destruction].

“**Reinstatement Plan**” has the meaning given in Section 6.16 [Reinstatement Plan].

“**Reinstatement Work**” has the meaning given in Section 6.15 [Restoration and Reinstatement of Damage or Destruction].

“**Reject**” means an action (including recycling or destroying) to remove a detected Nonconformity from the Project Work or discontinue its use.

“**Release**” includes any spill, leak, deposit, pumping, pouring, emission, emptying, discharging, injecting, escape, leaching, migration, disposal, dumping or other form of release of a Hazardous Substance, or permitting of any of the foregoing.

“**Relevant Authority**” means any entity whose authority is or may be required for the carrying out of all or any part of the Project Work or which has any authority or right in respect of the Project, the Project Infrastructure, the Project Site or any part thereof under any Laws and includes Governmental Authorities.

“**Relevant Completion Percentage**” has the meaning given in Section 2.1(b) of Schedule 10 [Payment and Performance Mechanism].

“**Relevant Persons**” means:

- (a) the Partners and, if applicable, the general partner and limited partners of each Partner;
- (b) persons who formerly were Partners or the general partner or limited partner of any Partner;
- (c) Affiliates of the Design-Builder; and
- (d) persons who formerly were Affiliates of the Design-Builder.

“**Relevant Property**” means any property that is not within the boundary of the Project Lands that is affected:

- (a) by any Existing Contamination or Province Subsequent Contamination in, on, under or over:
 - (i) any Project Lands; or
 - (ii) any Project Infrastructure; or

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- (b) by any migration or leaching of Existing Contamination or Province Subsequent Contamination from:
 - (i) any Project Lands; or
 - (ii) any Project Infrastructure.

“Relevant Third Party” means:

- (a) any person having a legal interest in any Relevant Property who suffers damage, injury or other harm caused by:
 - (i) Existing Contamination or Province Subsequent Contamination in, on, under or over:
 - (A) any Project Lands; or
 - (B) any Project Infrastructure; or
 - (ii) migration or leaching of any Existing Contamination or Province Subsequent Contamination into or onto the Relevant Property from:
 - (A) any Project Lands; or
 - (B) any Project Infrastructure; and
- (b) any person who suffers damage, injury or other harm caused by any Existing Contamination or Province Subsequent Contamination in, on or under any Relevant Property from time to time to the extent such Existing Contamination or Province Subsequent Contamination constitutes Existing Contamination or Province Subsequent Contamination which has migrated or leached into or onto the Relevant Property from:
 - (i) any Project Lands; or
 - (ii) any Project Infrastructure,

and **“Relevant Third Party”** includes the Province and BCTFA to the extent they have a legal interest in any Relevant Property.

“Relief Event” means any of the following events or circumstances:

- (a) receipt by the Design-Builder of an order or direction by Police or fire, ambulance or other emergency services or other Relevant Authorities, provided such order or direction does not result from the occurrence of another Supervening Event;
- (b) the inability of the Design-Builder to obtain a required Permit or a required renewal or extension of any required Permit due, in each case, to any unreasonable delay by a Relevant Authority, provided that the Design-Builder has made all reasonable efforts to obtain such Permit, renewal or extension, including making complete and timely

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application and, to the extent reasonably practicable, making modifications to the applicable design and/or construction methods;

- (c) fire, explosion, lightning or storm affecting the Project Site or the Project Infrastructure, other than a fire or explosion constituting a Compensation Event;
- (d) a Labour Dispute;
- (e) blockade or embargo falling short of a Protest Action or a Force Majeure Event;
- (f) the discovery of any Undisclosed Utilities;
- (g) the existence of any Non-Foreseeable Contamination;
- (h) the failure by a Utility Supplier to comply with its obligations under a Utility Agreement, where such compliance is necessary in connection with the performance of the Project Work and where the Design-Builder has made all reasonable efforts to cause the Utility Supplier to comply; and
- (i) the failure by the Municipality to comply with its obligations under the Municipal Agreement, where such compliance is necessary in connection with the performance of the Project Work and where the Design-Builder has made all reasonable efforts to cause the Municipality to comply.

“Repair” means an action that makes a detected Nonconformity acceptable for its intended purpose.

“Reports” has the meaning given in Section 2.1 [Required Reports] of Schedule 17.

“Request for Proposals” means the request for proposals in respect of the Project issued by the Province on February 8, 2019, together with all amendments, supplements and addenda thereto.

“Request for Qualifications” means the Request for Qualifications in respect of the Project issued by the Province on September 7, 2018, together with all amendments, supplements and addenda thereto.

“Required Insurance” means the insurance required to be taken out, maintained in force, paid for and renewed by the Design-Builder in accordance with the provisions of Part 6 [Insurance, Damage and Destruction] and Schedule 15 [Insurance Requirements].

“Required Province Change” means a Province Change contemplated in any of the following:

- (a) Section 7.2(b);
- (b) Section 1.2(b) of this Schedule;
- (c) Section 4.10 [New and Amended Utility Agreements] of Part 1 of Schedule 4;
- (d) Section 1.3(b) of Schedule 6 [Environmental Obligations];
- (e) Section 2.2 [Extension of Specified Handover Date by Province] of Schedule 8;

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- (f) Section 5.5 [Additions or Changes by Province Change] of Schedule 8; and
- (g) Section 2.2 [Other Agreements with Indigenous Groups] of Schedule 22.

“Requirements of Interested Parties” means the requirements of Interested Parties which are legally enforceable against any or all of the Province, BCTFA and the Design-Builder, whether established pursuant to Laws, the provisions of this Agreement or otherwise:

- (a) as disclosed or described in the Disclosed Data; or
- (b) which, as of the Financial Submittal Date, the Design-Builder otherwise had knowledge of, could have discovered through the exercise of reasonable due diligence, or could reasonably have been anticipated from an analysis of all relevant information available to the Design-Builder (including the Disclosed Data) as at the Financial Submittal Date, having regard to the opportunity afforded the Design-Builder to conduct such due diligence and analysis before the Financial Submittal Date.

“Responding Party” has the meaning given in Section 3.1 [Referral to Arbitration] of Schedule 16.

“Restricted Periods” means those periods of time, as set out in Sections 2.2 [Restricted Periods for Highway 91, Highway 17 and Highway 99], 3.2 [Restricted Periods for Highway 91C], 4.2 [Restricted Periods for Interchange Ramps], 5.2 [Restricted Periods for Other Specified Roads] or 6.2 [Restricted Periods for River Road] of Part 4 of Schedule 4, during any Construction for an identified location during which there are restrictions on the Design-Builder’s available Traffic Management measures in accordance with Part 4 [Traffic Management] of Schedule 4.

“Retaining Structure” means a vertical Structure designed to resist the horizontal earth pressures of a fill or other material.

“Review Procedure” means the procedure defined in Section 2.1 [Review Procedure] of Schedule 2 whereby submissions for review are made by the Design-Builder to the Province’s Representative.

“Rework” means an action that makes a detected Nonconformity conform to the Project Requirements.

“RIMS” or **“Road Inventory and Maintenance System”** means the Ministry’s corporate asset management system that maintains road asset and inventory information for the provincial highway network and through its multiple linear referencing provides the basis to integrate with other Ministry asset management systems.

“Risk Assessment Plan” means the sub-plan of the Traffic Management Plan described in Section 7.2.5 [Risk Assessment Plan] of Part 4 of Schedule 4.

“Road Base” means the portion of highway subsurface on which the travelling surface or wearing surface is placed.

“Road Safety Audit” means an audit carried out in accordance with Article 13 [Road Safety Audit] of Part 2 of Schedule 4.

“Road Safety Audit Team” means a group of individuals appointed from time to time in accordance with the Design and Certification Procedure to carry out road safety audits in respect of the Project Work.

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“**Road Safety Audit Certificate**” has the meaning given in Section 4.3 [Road Safety Audit Certificates] of Part 3 of Schedule 4.

“**Roadside**” means that part of the public highway between the edge of the Shoulder and the highway right-of-way boundary, excluding the Shoulder.

“**RPMS**” or “**Roadway Pavement Management System**” means the Ministry’s corporate pavement asset management application that is used for monitoring the condition of paved highways to support the planning, programming and delivery of the annual resurfacing plan.

“**RWIS**” means the Road Weather Information System that provides real time reporting of pavement and weather information.

“**SCR Points**” has the meaning given in Section 4.8(f) of Schedule 7.

“**Seismic Event**” means an earthquake and includes snowslide, landslide or other earth movements occurring concurrently with and directly resulting from an earthquake shock, but does not include Flood. More than one earthquake shock occurring within any 168 consecutive hours shall be deemed a single earthquake.

“**Service Life**” has the meaning given to that term in CAN/CSA-S6-14.

“**SFPR Concession Agreement**” means the redacted version of the concession agreement among the Province, BCTFA and the SFPR Concessionaire dated July 14, 2010 which has been provided by the Province to the Design-Builder and identified as the “SFPR Concession Agreement” for the purposes of this Agreement.

“**SFPR Concessionaire**” means FTG Fraser Transportation Group.

“**Shoulder**” means the area between the edge of the outside traffic lane and the ditch, including the components of Shoulder top, Shoulder edge and Shoulder side slope, and with the Shoulder edge being the breakpoint between the Shoulder top and the Shoulder side slope.

“**Side Protection**” means the railing, parapets or barriers of the Bridge Structure.

“**Sign**” means a lettered board, message or other display which includes all regulatory, warning, guide or informational, advisory, construction and maintenance, route markers and all special or other messages/displays under provincial jurisdiction as defined by the Province but excluding electronically controlled messages/displays, but including the sign face overlay.

“**Site Condition Rating**” has the meaning given in Section 4.8(d) of Schedule 7.

“**Site Materials**” means all materials, including soil, aggregates, gravel, rocks, coal, minerals or other deposits, excavated, arising or produced in connection with the carrying out of the Project Work on the Project Lands.

“**Site Superintendent**” means a person appointed by the Design-Builder or any Subcontractor to direct the work on the Project Site.

“**Special Events**” has the meaning given in Section 1.7 [Special Events] of Part 4 of Schedule 4.

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“**Specified Cost Item**” means a Cost Item identified in Appendix B [Progress Measurement Principles] to Schedule 10 as one in respect of which a Cost Item Progress Amount is payable only upon 100% completion thereof.

“**Specified Handover Date**” in respect of a parcel of Project Lands means the date specified as the “Specified Handover Date” for the parcel in Appendix A [Project Lands] to Schedule 8.

“**Stakeholder**” means commuters, local residents, local businesses, goods movers, adjacent property owners, marine users, Emergency responders, and any other individuals or audiences identified as stakeholders by the Province.

“**Statement of Progress**” has the meaning given in Section 6.1(a) of Schedule 10 [Payment and Performance Mechanism].

“**Statutory Holiday**” means a holiday as defined in the *Interpretation Act* (British Columbia).

“**Stoppage**” means an occasional, temporary interruption of traffic flow on Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road caused or directed by the Design-Builder for the purpose of facilitating Construction.

“**Structures**” means any (temporary or permanent):

- (a) Tunnel, Major Culvert, Major Retaining Wall, Major Sign Structure;
- (b) multi-span Bridge, tunnel or culvert having a cumulative span of 5 metres or more;
- (c) Bridge, tunnel or culvert (other than of corrugated metal) having a span of 1.8 metres or more and where the cover to the road surface is less than 1 metre;
- (d) corrugated metal Bridge or culvert having a span of 0.9 metres or more (irrespective of cover to the road surface);
- (e) pedestrian or cycle underpass (irrespective of span and cover to the road surface);
- (f) retaining wall, including reinforced earth, anchored earth and cribwall systems with slope between 45° and 90° to the horizontal, where the level of the fill at the back of the wall is greater than 1.5 metre above the finished ground level in front of the wall;
- (g) Sign or signal gantry or high mast for lighting, television cameras, catenary lighting systems or intelligent transportation system equipment;
- (h) buildings and weigh stations;
- (i) facing panel systems more than 1.5 metres in height; and
- (j) noise walls

forming part of the Project Infrastructure.

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“**Subcontract**” means any contract entered into by a Subcontractor in relation to the provision, performance or carrying out of any Project Work.

“**Subcontractor**” means any party (other than the Design-Builder) that enters into a contract in relation to the provision, performance or carrying out of any Project Work (including any contract for the supply of any Plant or Construction Plant) with:

- (a) the Design-Builder; or
- (b) any subcontractor of any tier of the Design-Builder.

“**Substantial Completion**” means the satisfactory completion, in accordance with the Design and Certification Procedure, of all Project Work required in respect of the Project Infrastructure in accordance with all Laws, Permits, applicable Project Requirements and other requirements applicable to the Project Infrastructure referred to or set out in this Agreement, to such extent as is necessary to permit the safe, uninterrupted and unobstructed public use of the Project Infrastructure, including but not limited to:

- (a) paving of all road surfaces, other than the following (together, the “**Deferred Paving**”):
 - (i) for the L550 alignment of the Highway 91C/Highway 17 Interchange only, the work comprised in paragraph (ii) of Cost Item 4.2g in Appendix B [Progress Measurement Principles] to Schedule 10; and
 - (ii) for the L1180 alignment of the Highway 91C/Weigh Scale Interchange only, the work comprised in paragraph (ii) of Cost Item 4.3g in Appendix B [Progress Measurement Principles] to Schedule 10;
- (b) completion of all Structures and drainage systems;
- (c) full operation of all traffic lighting and signalization, other than the following (together, the “**Deferred Electrical and Lighting**”):
 - (i) for the L550 alignment of the Highway 91C/Highway 17 Interchange only, the work comprised in Cost Item 4.2h in Appendix B [Progress Measurement Principles] to Schedule 10; and
 - (ii) for the L1180 alignment of the Highway 91C/Weigh Scale Interchange only, the work comprised in Cost Item 4.3h in Appendix B [Progress Measurement Principles] to Schedule 10;
- (d) all permanent Pavement Markings at all intersections and on all major roads;
- (e) installation of all regulatory, warning and guide signing;
- (f) installation of all median and Roadside barrier and other safety devices;
- (g) completion of all Utility Work;
- (h) all construction staging areas located on the Project Site have been returned to their original condition or a condition otherwise acceptable to the Province; and

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- (i) all Debris, superfluous materials and equipment have been removed from the Project Site, and the Project Site has been satisfactorily cleared,

in each case in accordance with the Project Requirements and this Agreement, and “**Substantially Completed**”, “**Substantially Completing**” and “**Substantially Complete**” have corresponding meanings.

“**Substantial Completion Date**” means the date on which Substantial Completion occurs, as established by the Certificate of Substantial Completion.

“**Substantial Completion Longstop Date**” means at any time the date that is twelve months after the Substantial Completion Target Date, as such first mentioned date may be extended pursuant to this Agreement.

“**Substantial Completion Target Date**” means November 30, 2022.

“**Substructure**” means abutments, piers, their Foundations and protective works which form the Bridge Substructure supporting the Superstructure above.

“**Superelevation**” means the vertical rise in elevation from the outside edge of a highway surface, to the inside edge on a curving section of highway, and “**Superelevated**” has a corresponding meaning.

“**Superstructure**” means the entire Structure of a Bridge resting on the piers and abutments, consisting of stringers, decking, trusses, sidewalks, Wearing Surface and railing.

“**Supervening Event**” means any of a Compensation Event, Relief Event or Force Majeure Event.

“**Supervening Event Notice**” has the meaning given in Section 8.2(a).

“**Surveillance Quality Audit**” means Quality Audits conducted by or on behalf of the Province as contemplated in Section 4.3.3(a) of Schedule 7 [Quality Management].

“**Table of Commitments**” means the document attached as Appendix B [Table of Commitments] to Schedule 6, and as amended, supplemented or replaced from time to time.

“**TAF**” means a technical appraisal form substantially in the format attached as Appendix D [Sample Contents for a Structural TAF] to Schedule 4, and submitted by the Design-Builder to the Province’s Representative in accordance with the Design and Certification Procedure.

“**Tax**” or “**Taxes**” means, from time to time, all present and future taxes, surtaxes, duties, levies, imposts, rates, fees, deductions, withholdings, assessments and similar impositions imposed, levied, rated, collected, charged, withheld or assessed by or payable to any Governmental Authority (including income, capital (including large corporations), withholding, consumption, sales, use, transfer, goods and services or other value-added, excise, customs, anti-dumping, countervail, net worth, stamp, registration, franchise, payroll, employment, health, education, business, school, property, local improvement, development, education development and occupation taxes, surtaxes, duties, levies, imposts, rates, fees, deductions, withholdings, assessments and similar impositions), and any other payments imposed by any Governmental Authority in lieu of any of the foregoing, together with all fines, interest, penalties on or in respect of, or in lieu of or for non-collection of, those taxes, surtaxes, duties, levies, imposts, rates,

payments, assessments, withholdings, dues and other charges, and includes all PST and GST except where stated to the contrary.

“**Temporary Land Rights**” means those Land Rights that have an anticipated expiry date that will occur before the Substantial Completion Date, and identified as “Temporary Land Rights” on the Land Identification Drawings.

“**Temporary Works**” means all works and things of a temporary nature of every kind required in or about the execution and completion of the Project Work.

“**Term**” means the period commencing on the Effective Date and ending at 11:59 p.m. on the date that is the later of:

- (a) the end of the period for the notification of Latent Project Work Defects in Section 2.2(b) of Schedule 5 [Project Work Defects and Warranties]; and
- (b) the completion of any work performed by the Design-Builder to correct any Project Work Defects pursuant to Schedule 5 [Project Work Defects and Warranties].

“**Termination Date**” means the effective date of termination of this Agreement according to its terms.

“**Third Party Contractor**” means any contractor (excluding the Design-Builder and any person for whom the Design-Builder is in law responsible) that, on behalf of the Province or BCTFA, has carried out or will carry out work after the Effective Date in respect of the Project Infrastructure or otherwise on the Project Site, including any Other Prime Contractor as defined in Section 4.16(a).

“**Third Party Facilities**” means bus shelters, telephone facilities, kiosks, Utilities and other facilities and associated equipment, plant, materials and apparatus installed and operated or to be installed and operated on the Project Site or areas adjacent to the Project Site by any transit authority, communications provider, Utility Supplier or other third party.

“**Third Party IP**” means the Intellectual Property specifically identified as Third Party IP in Appendix C [Background IP and Third Party IP] to this Schedule that is owned by a person other than the Design-Builder or a Subcontractor, or any Affiliate thereof, and that and is or will be embedded in or used in connection with the Project Intellectual Property, or necessary or desirable to implement, operate or exploit the Project Intellectual Property, but which was not created or brought into existence for any of the Project Intellectual Property Purposes.

“**Total Completion**” means the satisfactory full and final completion, in accordance with the Design and Certification Procedure, of all Project Work required in respect of the Design and Construction in accordance with all Laws, Permits, applicable Project Requirements and other requirements referred to or set out in this Agreement, including the completion of the remedy of all Final Deficiency List Deficiencies and the completion of the Deferred Paving and the Deferred Electrical and Lighting, and “**Totally Completed**”, “**Totally Completing**” and “**Totally Complete**” have corresponding meanings.

“**Total Completion Date**” means the date on which Total Completion occurs, as established by the relevant Certificate of Total Completion.

“**Total Completion Target Date**” means the date that is 180 days after the Substantial Completion Date, as such first mentioned date may be extended pursuant to this Agreement.

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“**Traffic Advisory Committee**” has the meaning given in Section 5.3(a) of Schedule 9 [Communications and Engagement].

“**Traffic Communications Plan**” means the sub-plan of the Traffic Management Plan described in Section 7.2.4 [Traffic Communications Plan] of Part 4 of Schedule 4.

“**Traffic Control**” means the placement or erection of Signs, signals, Pavement Markings or other installations, and the use of flaggers and other personnel, for the purpose of regulating, warning or guiding traffic.

“**Traffic Control Plan**” or “**TCP**” means the sub-plan or sub-plans of the Traffic Management Plan prepared by the Design-Builder in accordance with Section 7.2.1 [Traffic Control Plans] of Part 4 of Schedule 4.

“**Traffic Control Supervisor**” means a person appointed by the Design-Builder in accordance with Section 8.4 [Traffic Control Supervisors] of Part 4 of Schedule 4.

“**Traffic Crash**” means sudden and unexpected vehicle collision which results in damage and/or injury, or loss of control.

“**Traffic Data**” means all information relating to traffic:

- (a) in the Reports submitted by the Design-Builder pursuant to Schedule 17 [Records and Reports]; and
- (b) obtained by the Province by direct interrogation of the measurement equipment provided by the Design-Builder as part of the Project Work.

“**Traffic Disruption Event**” means a Closure or Stoppage on Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road.

“**Traffic Engineer**” means the person appointed by the Design-Builder in accordance with Section 8.3 [Traffic Engineer] of Part 4 of Schedule 4.

“**Traffic Management**” means the recognition of the various situations where Traffic Control and guidance are required, and the implementation of effective procedures, including Traffic Control, to safely control and guide traffic with minimal interruptions and delays.

“**Traffic Management Auditing**” has the meaning given in Section 4.8(b) of Schedule 7.

“**Traffic Management Payments**” means the payments to be made by the Design-Builder to the Province pursuant to Section 4.2 [Calculation of Traffic Management Payments] of Schedule 10.

“**Traffic Management Plan**” or “**TMP**” means the plan prepared by the Design-Builder in accordance with Article 7 [Traffic Management Plan] of Part 4 of Schedule 4.

“**Traffic Manager**” means the person appointed by the Design-Builder in accordance with Section 8.2 [Traffic Manager] of Part 4 of Schedule 4.

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“**Traffic Operations Requirements**” means the requirements set out in the Traffic Operations Memo, the Traffic Operations Addendum #1 and the Traffic Operations Addendum #2, provided that, where a conflict arises between the requirements set out in these documents, the requirements set out in the latter Addendum shall apply.

“**Traffic Quality Management Plan**” or “**TQMP**” means the plan for the quality management of the Traffic Management for the Project Facilities prepared by the Design-Builder in accordance with Appendix D [Traffic Quality Management Plan] to Schedule 7.

“**TransLink**” means South Coast British Columbia Transportation Authority.

“**Travelled Lane**” means the surface of a highway:

- (a) between the painted Shoulder line on one side and the painted Shoulder line on the other side; or
- (b) in the absence of Shoulder lines, from asphalt edge to asphalt edge; or
- (c) in the absence of hard surfacing, as defined for a dirt and gravel highway,

and includes the trafficable portions of rest areas, pullout areas, parking areas, weigh scale areas, and any other vehicle-accessible portions within the highway right-of-way.

“**Trespassers**” has the meaning given in Section 8.8(a).

“**Tunnels**” means any buried structure intended to convey pedestrian, wild life, farm animals or vehicular traffic, with a minimum dimension of 3 meters and including snowsheds with respect to inspection and performance requirements.

“**Underpass**” means a Structure carrying a road, a highway, a railway or pedestrians over a highway.

“**Undisclosed Utilities**” means any Utilities (other than Utility Service Connections and abandoned Utilities) located underground on the Project Site and the Project Infrastructure (and, for greater certainty, not visible on or above ground), the existence of which:

- (a) was not disclosed, or is discovered more than two metres in any horizontal direction from the location disclosed, to the Design-Builder in the Disclosed Data as at the Financial Submittal Date; and
- (b) the Design-Builder does not otherwise have knowledge of, could not have discovered through the exercise of reasonable due diligence prior to the Financial Submittal Date, and could not reasonably have been anticipated from any analysis of all relevant information available to the Design-Builder (including the Disclosed Data) as at the Financial Submittal Date, having regard to the opportunity afforded the Design-Builder to conduct such due diligence and analysis before the Financial Submittal Date.

“**Use As Is**” means that no action to eliminate a detected Nonconformity is needed.

“**Utilities**” means privately, publicly or cooperatively owned lines, facilities or systems for transmitting or distributing electricity, data, communications, gas, oil and petroleum products, water, storm water and

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sewage or other similar commodity which serve the public directly or indirectly, including underground, surface and overhead facilities as well as facilities which use common poles, ducts or conduits on a shared basis, all related and ancillary Infrastructure and all Utility Service Connections.

“**Utility Agreements**” means all agreements entered into by the Province or BCTFA with a Utility Supplier in connection with the construction, installation, operation, repair, preservation, relocation and/or maintenance of Utilities in, on, under, over or adjacent to the Project Infrastructure and the Project Site or any part thereof, and includes any site or other permits issued thereunder or pursuant thereto, all as amended, supplemented or replaced from time to time.

“**Utility Service Connections**” means:

- (a) the direct connections to the point of the utility mains (including to transmission or distribution mains) that specifically provide utility service to privately-owned properties, which include any properties owned in fee simple by a public agency or road dedication where a public agency has an agreement to operate a service within such road dedication; and
- (b) any private utilities within such privately-owned properties, which include any properties owned in fee simple by a public agency or road dedication where a public agency has an agreement to operate a service within such road dedication.

“**Utility Supplier**” means the owner of any Utility.

“**Utility Work**” means temporary and permanent installation, protection, removal and relocation works relating to Utilities carried out in connection with or as part of the Project Work and related and ancillary works.

“**Value Engineering Proposal**” has the meaning given in Section 7.4 [Value Engineering Proposals].

“**Warranty Holdback**” has the meaning given in Section 3.2(a) of Schedule 5 [Project Work Defects and Warranties].

“**WCA**” means the *Workers Compensation Act* (British Columbia).

“**Wearing Surface**” means the surface portion of a Bridge Deck directly in contact with the wheels of vehicles.

“**Website**” has the meaning given in Section 2.1(i)(ii) of Schedule 9 [Communications and Engagement].

“**Workers’ Compensation Board**” means the Board defined in and continued under the WCA.

“**Work Method Statements**” or “**WMS**” means written management plans for critical and complex activities, processes or plans where the absence of written instructions could have a negative impact on worker safety, quality, consistency, cost or schedule, which constitute commitments of the Design-Builder and describe how work shall be performed, inspected or tested and shall include a checklist to confirm that work is being conducted in accordance with the appropriate standard, code, specification or plan in accordance with this Agreement.

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“**Works Schedule**” means the detailed schedule for design, investigation, construction, testing, commissioning and related activities within the Design and Construction, to be submitted by the Design-Builder pursuant to, and as subsequently amended from time to time in accordance with, Section 1.3 [Works Schedule] of Schedule 3.

1.2 Reference Documents

- (a) The Reference Documents are referenced in this Agreement by the “Short Form” identified on Appendix A [Reference Documents] to this Schedule.
- (b) The Design-Builder shall at all times comply with the then most current versions of all Reference Documents, provided that, if and to the extent that any amendment, supplement or replacement of or to any Reference Document after the Financial Submittal Date impacts the design, quality or scope of the Project Work or the Design and Construction or any part thereof:
 - (i) if and to the extent that compliance with such amendment, supplement or replacement of or to such Reference Document is required for the Design-Builder’s continued compliance with Laws (the onus of establishing which shall be on the Design-Builder), but without limiting the Design-Builder’s obligation to comply with Laws, the Province shall issue a Province Change to require compliance with such amendment, supplement or replacement of or to such Reference Document and the provisions of Part 7 [Province Changes and the Design-Builder Proposals] shall apply accordingly; and
 - (ii) in all other cases, the Design-Builder shall not be required to comply with such amendment, supplement or replacement of or to such Reference Document unless the Province has issued a Province Change to require such compliance, in which case the provisions of Part 7 [Province Changes and the Design-Builder Proposals] shall apply accordingly.

PART 2 **INTERPRETATION**

This Agreement will be interpreted according to the following provisions, save to the extent that the context or the express provisions of this Agreement otherwise require:

2.1 Waiver of *Contra Proferentum*

The parties waive the application of any rule of law which otherwise would be applicable in connection with the construction of this Agreement that ambiguous or conflicting terms or provisions should be construed against the party who (or whose counsel) prepared the executed agreement or any earlier draft of the same, or against the party benefiting from such terms or provisions.

2.2 Headings

The table of contents, headings and sub-headings, and references to them, in this Agreement, are for convenience of reference only, do not constitute a part of this Agreement, and will not be taken into consideration in the interpretation or construction of, or affect the meaning of, this Agreement.

2.3 Cross References

All references to Parts, Articles, Sections, paragraphs and Schedules are references to the relevant Parts, Articles, Sections, paragraphs and Schedules of this Agreement unless reference is made to another Agreement. Without limiting the generality of the foregoing, reference in this Agreement, or in a Schedule of this Agreement, to a Part, Article or Section refers to the applicable Part, Article or Section in this Agreement (excluding the Schedules), unless reference to a Part, Article, Section or paragraph of a particular Schedule to this Agreement is indicated.

2.4 Internal References

The words “**herein**”, “**hereof**” and “**hereunder**” and other words of similar import refer to this Agreement as a whole and not to any particular Part, Article, Section, paragraph or Schedule of this Agreement.

2.5 Reference to Statutes and Reference Documents

- (a) Unless a reference to a statute or statutory provisions (including any subordinate legislation) refers expressly to a statute or statutory provision in effect at a particular time (in which case the reference is to the statute or statutory provision in effect at that time), references to any statute or statutory provision (including any subordinate legislation) include any statute or statutory provision which amends, extends, consolidates or replaces the same or which has been amended, extended, consolidated or replaced by the same. References to any statute or statutory provisions include any applicable orders, regulations, bylaws, ordinances, orders, codes of practice, instruments or other subordinate legislation made under the relevant statute or statutory provision.
- (b) Unless a reference to a Reference Document refers expressly to a Reference Document in effect at a particular time (and provided that the reference to a particular name, date, edition, version or similar description as a “Document Name” identified for a particular Reference Document on Appendix A [Reference Documents] to this Schedule shall not constitute such an express reference), but subject to Section 1.2(b) of this Schedule, references to any Reference Document include any document which amends, extends, consolidates or replaces the same or which has been amended, extended, consolidated or replaced by the same.

2.6 Reference to Statutory or Public Duties or Functions

References to statutory or public duties or functions are references to such duties or functions (including powers and discretions) from time to time and include any common law duties and functions (including powers and discretions).

2.7 Reference to Right or Duty of a Governmental Body

A reference to any right, power, obligation, duty or responsibility of any Governmental Authority or of any board or commission of any Governmental Authority is to the Governmental Authority or the board or commission that, pursuant to Laws, has such right, power, obligation or responsibility at the relevant time.

2.8 Time

- (a) All references to time of day are references to Pacific Standard time or Pacific Daylight Saving time, as the case may be, in Vancouver, British Columbia.
- (b) If the time for doing an act falls or expires on a day that is not a Business Day, the time for doing such act will be extended to the next Business Day.

2.9 Time of the Essence

Time is of the essence of this Agreement, and remains of the essence in respect of any extension of time given.

2.10 Number

Words importing the singular include the plural and vice versa.

2.11 Gender

Words importing a particular gender include all genders.

2.12 Reference to Office of a Governmental Body

Each reference to a minister, ministry, office, branch, agency, board, commission or similar body of any Governmental Authority shall be deemed to be a reference to any successor or replacement in function of such minister, ministry, office, branch, agency, board, commission or similar body.

2.13 Reference to Public Organizations

Any reference to a public organization will be deemed to include a reference to any successor(s) to such public organization or any organization or entity or organizations or entities which has or have taken over the functions or responsibilities of such public organization.

2.14 Persons for Whom Design-Builder is Responsible

A reference to a person or persons for whom the Design-Builder is in law responsible means and is limited to: the Key Individuals; officers, employees, consultants, agents, professional advisors (including legal and financial advisors) and invitees; any person over whom the Design-Builder could reasonably be expected to exercise control and the Subcontractors and their respective officers, employees, consultants and agents; and any other person for whom the Design-Builder is responsible in law or by the terms of this Agreement.

2.15 Persons for Whom Province is Responsible

A reference to a person or persons for whom the Province is in law responsible means and is limited to:

- (a) BCTFA, but only in respect of performing functions in relation to the Project, the Project Site, the Project Infrastructure or this Agreement;

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- (b) the Province's Representative in its capacity as such under this Agreement; and
- (c) employees, agents, professional advisors (including legal and financial advisors) and contractors of the Province or BCTFA (which may include Third Party Contractors) in all cases only while performing functions of, or on behalf of, the Province or BCTFA in relation to the Project, the Project Site, the Project Infrastructure or this Agreement;

but excludes the Design-Builder and any person for whom the Design-Builder is in law responsible pursuant to Section 2.14 [Persons for Whom the Design-Builder is Responsible] of this Schedule.

2.16 Reference to Legal Entity

Any reference to a corporate or other legal entity includes and is also a reference to any entity that is a successor to such entity.

2.17 Currency

All monetary amounts are expressed in Canadian dollars and all amounts to be calculated and paid pursuant to this Agreement are to be calculated and paid in Canadian dollars.

2.18 Costs

Without limiting Section 9.10 [Costs and Expenses], whenever this Agreement obliges the Province to pay any amount to the Design-Builder in respect of any costs, expenses, fees, charges, liabilities, losses, claims or other sums incurred by the Design-Builder:

- (a) such obligation will be construed as applying only to so much of such sums as have been properly incurred on an arm's length commercial basis or, where not incurred on an arm's length commercial basis (including when the payment is made to an Affiliate of the Design-Builder), so much of them as are proper and reasonable; and
- (b) the Design-Builder will, when requested by the Province, provide reasonable supporting evidence of such costs, expenses, fees, charges, liabilities, losses, claims or other sums.

2.19 Knowledge of Province

The Province will not be imputed with knowledge of any fact, matter or thing unless that fact, matter or thing is within the actual knowledge of the Province's Representative or within the actual knowledge of those of the Province's employees and agents who have responsibilities in connection with the conduct of the Project or the Project Work.

2.20 Knowledge of Design-Builder

Without limiting the extent of its actual knowledge, the Design-Builder will for all purposes of this Agreement be deemed to have such knowledge in respect of the Project and the Project Work as is held (or ought reasonably to be held) by all persons involved in carrying out the Project and the Project Work including the Design-Builder, the Partners, the general partner of each Partner, as applicable, any Subcontractors, and their respective officers, employees, consultants and agents, and any Proponent Team Member of the Preferred Proponent (as such terms are defined in the Request for Proposals).

2.21 Performance to Standards

Any requirement for any thing or action to be “in accordance with”, “in conformity with” or “in compliance with” any standard, code, criteria, specification, guideline or other requirement or stipulation, and any requirement expressed using words or phrases of similar import, means that such thing or action is to exceed or at least equal that standard, code, criteria, specification, guideline or other requirement or stipulation.

2.22 Words of Inclusion; Mandatory Provisions

- (a) The words “**include**”, “**includes**” or “**including**” are to be construed as meaning “include without limitation”, “includes without limitation” and “including without limitation”, respectively, and the words following “include”, “includes” and “including” shall not be considered to set forth an exhaustive list.
- (b) The words “**will**” and “**shall**” are synonymous with each other and used interchangeably herein to designate a mandatory requirement or obligation, as applicable.

2.23 General Meanings Not Restricted

General words are not given a restrictive meaning:

- (a) if they are introduced by the word “other”, by reason of the fact that they are preceded by words indicating a particular class of act, matter or thing; or
- (b) by reason of the fact that they are followed by particular examples intended to be embraced by those general words.

2.24 Trade Meanings

Unless otherwise defined in this Agreement or the context otherwise requires, words or abbreviations which have well-known and accepted trade meanings are used in accordance with those meanings.

2.25 Decisions of the Province

Where in this Agreement:

- (a) the Province, BCTFA, the Minister or the Province’s Representative is entitled to make a decision or determination, or to grant or withhold any consent, approval or acceptance or to exercise any judgement (in this Section 2.26, any such decision, determination, grant, withholding or exercise is referred to as an “**Province Decision**”), “in its discretion” or “in the discretion” of the Province, BCTFA, the Minister or the Province’s Representative, as the case may be, or words of similar import; or
- (b) the Province, BCTFA, the Minister or the Province’s Representative is entitled to make a Province Decision and there is neither express language conferring discretion as contemplated by Section 2.25(a) of this Schedule nor express language requiring the Province, BCTFA, the Minister or the Province’s Representative, as the case may be, to act reasonably or not to act unreasonably,

the Province, BCTFA, the Minister or the Province's Representative, as the case may be, shall be entitled to make the relevant Province Decision in its sole, absolute, unfettered and subjective discretion.

2.26 All Reasonable Efforts

- (a) The expression "**all reasonable efforts**", when used in connection with an obligation of the Design-Builder, means taking all reasonable steps to achieve the objective and to perform the obligation, including doing all that can reasonably be done in the circumstances taking into account the Design-Builder's obligations hereunder to mitigate delays and additional costs to the Province and BCTFA, and in any event taking no less steps and efforts than those that would be taken by a reasonable and prudent person in comparable circumstances but where the whole of the benefit of the obligation and where all the results of taking such steps and efforts accrued solely to that person's own benefit.
- (b) The expression "**all reasonable efforts**", when used in connection with an obligation of the Province or BCTFA, means taking all reasonable steps to achieve the objective and to perform the obligation, including doing all that can reasonably be done in the circumstances taking into account the obligations of the Province or BCTFA, as the case may be, hereunder to mitigate delays and additional costs to the Design-Builder, and in any event taking no less steps and efforts than those that would be taken by a reasonable and prudent person in comparable circumstances but where the whole of the benefit of the obligation and where all the results of taking such steps and efforts accrued solely to that person's own benefit, provided that the foregoing shall not require the Province or BCTFA to:
 - (i) take any action which is contrary to the public interest or decline, refrain or abstain from taking any action which is in the public interest, as determined by the Province or BCTFA in its discretion;
 - (ii) exercise or refrain, decline or abstain from exercising any statutory or administrative law power, authority or discretion; or
 - (iii) undertake any mitigation measure that might be available arising out of its status as the Crown or as a legislative or public body that would not normally be available to a private commercial party.

2.27 Accounting Terms

All accounting and financial terms used herein are, unless otherwise indicated, to be interpreted and applied in accordance with GAAP, consistently applied.

2.28 Severability

Each provision of this Agreement will be valid and enforceable to the fullest extent permitted by law. If any provision of this Agreement is held to be invalid, unenforceable or illegal to any extent, such provision may be severed and such invalidity, unenforceability or illegality will not prejudice or affect the validity, enforceability and legality of the remaining provisions of this Agreement. If any such provision of this Agreement is held to be invalid, unenforceable or illegal, the parties will promptly endeavour in good faith to negotiate new provisions to eliminate such invalidity, unenforceability or illegality and to restore this Agreement as nearly as possible to its original intent and effect.

2.29 No Derogation from Laws

No provision of this Agreement is intended to derogate from or be inconsistent with or in conflict with any Laws and no provision of this Agreement shall be interpreted in a manner as to result in any such derogation, inconsistency or conflict and, if any such provision is found by a court of competent jurisdiction to be inconsistent with or in conflict with any Laws, the applicable Laws will prevail and such provision will be read down or rendered inoperative (either generally or in such particular situation, as appropriate), to the extent of such conflict or inconsistency, as the case may be and, if any such provision is found by a court of competent jurisdiction to derogate from any Laws, then such provision will be read down or rendered inoperative (either generally or in such particular situation, as appropriate) to the extent of the derogation.

2.30 Joint and Several

The obligations and liabilities of the Design-Builder under this Agreement shall be the obligations and liabilities of the Design-Builder and each of the Partners, jointly and severally with each other.

2.31 Principles for Resolving Conflicts within Documents

In the case of any conflict, ambiguity or inconsistency between or among any of the provisions within the main body of this Agreement or any of the Schedules hereto, including any conflict, ambiguity or inconsistency between or among any of the provisions within Schedule 4 or any of the Project Requirements, the following principles will apply unless the matter is expressly addressed elsewhere in this Agreement:

- (a) in the case of any conflict, ambiguity or inconsistency relating to the quality, manner or method of performing the Project Work, the provisions (including any part of the Proposal Extracts) establishing the higher quality, manner or method of performing the Project Work, using the more stringent standards, or the broader scope of the Project Work will prevail, with the intent that the provisions which produce the higher quality with the higher levels of safety, durability, performance and service will govern;
- (b) in the case of any conflict, ambiguity or inconsistency relating to the application of any codes and standards referred to in the Project Requirements, the Design-Builder shall promptly provide the Province's Representative with written notice including full particulars of the conflict, ambiguity or inconsistency and the conflict, ambiguity or inconsistency shall be resolved in accordance with a written direction given by the Province to the Design-Builder, which shall be given as soon as reasonably practicable after receipt by the Province's Representative of such notice from the Design-Builder;
- (c) in the case of any conflict, ambiguity or inconsistency between or among the Proposal Extracts and any other provision of this Agreement, the provision of this Agreement or the relevant part or parts thereof shall prevail unless in the discretion of the Province and by written direction given by the Province to the Design-Builder (which direction shall be given as soon as reasonably practicable after, and in any event within 15 Business Days after, the Province's Representative receives written notice of such conflict, ambiguity or inconsistency from the Design-Builder) the Province confirms that the relevant Proposal Extract or the relevant part or parts thereof shall prevail; and

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- (d) in the case of any dispute regarding other conflict, ambiguity or inconsistency, the dispute will be resolved in accordance with the Dispute Resolution Procedure applying accepted rules of contract interpretation.

2.32 No Additional Payments or Time

The Design-Builder will not be entitled to any additional payment, reduction in any payment to be made by the Design-Builder or extension of time under this Agreement as a result of the existence of any conflict, ambiguity or inconsistency referred to in Section 2.31 [Principles for Resolving Conflicts within Documents] of this Schedule or as a result of giving effect to any resolution of any such conflict, ambiguity or inconsistency pursuant to Section 2.31 [Principles for Resolving Conflicts within Documents] of this Schedule (whether by the terms of Section 2.31 [Principles for Resolving Conflicts within Documents] of this Schedule, by agreement between the Province and the Design-Builder, or pursuant to the Dispute Resolution Procedure).

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**APPENDIX A
REFERENCE DOCUMENTS**

Short Form	Document Name
AASHTO LRFD Bridge Design Specifications	AASHTO <i>LRFD Bridge Design Specifications, 8th Edition, 2017</i>
AASHTO LRFD Bridge Construction Specifications	AASHTO <i>LRFD Bridge Construction Specifications, 4th Edition, 2017</i>
AASHTO MASH	AASHTO <i>Manual for Assessing Safety Hardware, Second Edition, 2016.</i>
AASHTO Roadside Design Guide	AASHTO <i>Roadside Design Guide, 2011.</i>
Agricultural Impact Assessment Report	Talisman Resource Consultants Inc. <i>Highway 91/17 ALR Assessment Report – DRAFT, February 2019.</i>
Air Emissions – Environment and Climate Change Canada Best Practices for Emission Reduction	Cheminfo Services Ltd. for Environment Canada, Transboundary Issues Branch <i>Best Practices for the Reduction of Air Emissions from Construction and Demolition Activities, March 2005.</i>
Amphibians and Reptiles BMPs	Ministry of Forests, Lands and Natural Resource Operations and Ministry of Environment <i>Guidelines for Amphibian and Reptile Conservation during Urban and Rural Land Development in British Columbia, 2014.</i>
ANSI C136.31	American National Standards Institute, Inc. <i>American National Standard for Roadway and Area Lighting Equipment-Luminaire Vibration, 2011.</i>
Archaeological Handbook	BC Ministry of Small Business, Tourism and Culture, Archaeology Branch <i>British Columbia Archaeological Resource Management Handbook, February 1998.</i>
Archaeological Impact Assessment Guidelines	BC Ministry of Small Business, Tourism and Culture, Archaeology Branch <i>BC Archaeological Impact Assessment Guidelines, Revised October 1998.</i>
ASTM D1621	ASTM <i>D1621-16 Standard Test Method for Compressive Properties of Rigid Cellular Plastics, 2016.</i>
ASTM D4694	ASTM <i>D4694-15, Standard Test Method for Deflections with a Falling-Weight-Type Impulse Load Device, September 2015.</i>
ASTM D4695	ASTM <i>D4695-15, Standard Guide for General Pavement Deflection Measurements, March 2015.</i>
ASTM D6359	ASTM <i>D6359, Standard Specification for Minimum Retro-reflectance of Newly Applied Pavement Marking Using Portable Hand-Operated Instruments, 1999.</i>
Asphalt Institute MS-17	Asphalt Institute <i>Asphalt Overlays and Pavement Rehabilitation 1st Edition No.17 (MS 17), 1969.</i>
ATC-49	MCEER/ATC-49 <i>Recommended LRFD Guidelines for the Seismic Design of Highway Bridges, 2003.</i>
BC Ambient Air Quality Objectives	Province of British Columbia <i>British Columbia Ambient Air Quality Objectives Updated May 9, 2018</i>
BC Supplement to CAN/CSA-S6-14	BC Ministry of Transportation <i>Bridge Standards and Procedures Manual – Volume 1 – Supplement to CAN/CSA-S6-14, October 28, 2016.</i>
BC Supplement to TAC	BC Ministry of Transportation <i>Supplement to TAC Geometric Design Guide (BCTAC), 2007 (Updated July 4, 2014).</i>
Bicycle Traffic Control Guidelines	Transportation Association of Canada <i>Bikeway Traffic Control Guidelines for Canada, 2012.</i>

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Short Form	Document Name
Blue Book	BC Road Builders and Heavy Construction Association <i>The Blue Book Equipment Rental Rate Guide</i> .
Bridge Standards and Procedures Manual	BC Ministry of Transportation <i>Bridge Standards and Procedures Manual</i> , 2005-2016.
Burns Bog Ecological Conservancy Area Management Plan	Metro Vancouver <i>Burns Bog Ecological Conservancy Area Management Plan</i> , 2007.
CAN/CSA A283	CAN/CSA A283, <i>Qualification Code for Concrete Testing Laboratories</i> , 2006, Reaffirmed in 2016
CAN/CSA-S6-14	<i>Canadian Highway Bridge Design Code</i> , CAN/CSA-S6-14, 2014.
CAN/CSA W178.1	CAN/CSA W178.1, <i>Certification of Welding Inspection Organizations</i> , 2018.
CAN/CSA W178.2	CAN/CSA W178.2, <i>Certification of Welding Inspectors</i> , 2018.
CAN/ULC-S102.2-10	CAN/ULC-S102.2-10 <i>Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies</i> , 2010.
Canada-wide Standards for Particulate Matter and Ozone	Canadian Council of Ministers of the Environment <i>Canada Wide Standards for Particulate Matter and Ozone</i> , 2012.
Catalogue of Standard Traffic Signs	BC Ministry of Transportation <i>Catalogue of Standard Traffic Signs</i> .
CMT Handbook	BC Ministry of Small Business, Tourism and Culture, Archaeology Branch <i>Culturally Modified Trees of British Columbia - A Handbook for the Identification and Recording of Culturally Modified Trees</i> , March 2001.
CTA Cost Apportionment Guidelines	Canadian Transportation Agency <i>Apportionment of Costs of Grade Separations: A Resource Tool</i> , November 2011.
Culvert and Fish Passage Fact Sheet	BC Ministry of Transportation <i>Culvert and Fish Passage Information Sheet</i> , May 2013.
DBSS	BC Ministry of Transportation and Infrastructure <i>2018 Design-Build Standard Specifications for Highway Construction</i> , Adopted November 1, 2018.
Develop with Care	Ministry of Forests, Lands and Natural Resource Operations and Ministry of Environment <i>Develop with Care: Environmental Guidelines for Urban and Rural Development in British Columbia</i> , 2014.
DFO Fisheries Protection Policy Statement	Department of Fisheries and Oceans, Canada <i>Fisheries Protection Policy Statement</i> , October 2013.
DFO Measures to Avoid Causing Harm to Fish and Fish Habitat	Department of Fisheries and Oceans, Canada <i>Measures to Avoid Causing Harm to Fish and Fish Habitat</i> , November 2013. (modified: Dec.14,2018)
DNR Boardwalk Special Provisions and Drawings	<i>Delta Nature Reserve Boardwalk Special Provisions and Drawings</i> , June 2019.
Earthquake Time Histories	Klohn Crippen Berger Ltd. <i>Earthquake Time Histories</i> , January 31, 2019.
Econolite Cobalt Controller Unit Programming Guide	BC Ministry of Transportation and Infrastructure <i>Econolite Cobalt Controller Unit Programming Guide</i> , July 2016.
EGBC Independent Review Guidelines	EGBC <i>Quality Management Guidelines - Documented Independent Review of Structural Designs</i> , Version 1.4, January 9, 2018.
EGBC Climate Change – Resilient Design	EGBC <i>Professional Practice Guidelines, Developing Climate Change – Resilient Designs for Highway Infrastructure in British Columbia (Interim) V1.0</i> .

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Short Form	Document Name
EGBC Seismic Design Guidelines	EGBC <i>Guidelines – Performance-Based Seismic Design of Bridges in BC</i> , March 23, 2018.
Electrical and Signing Materials Standards	BC Ministry of Transportation <i>Electrical and Signing Materials Standards</i> (Draft), 2003 and including Volume 1 updated June 2014.
Electrical and Traffic Engineering Manual	BC Ministry of Transportation <i>Electrical and Traffic Engineering Manual – Guidelines for the Design of Lighting, Signal and Sign Installation</i> , 2013.
Electrical Maintenance Specifications - Service Area 6	BC Ministry of Transportation, <i>Electrical Maintenance Specifications and Local Area Specifications for Service Area 6</i> , 2014.
FHWA Circular No. 7	U.S. Department of Transportation Federal Highway Administration <i>Geotechnical Engineering Circular No. 7: Soil Nail Walls Reference Manual 7th Edition</i> , 2015.
FHWA Guidelines	U.S. Department of Transportation Federal Highway Administration <i>Design and Construction of Mechanically Stabilized Earth Walls and Reinforced Soil Slopes – Volume I and II</i> , 2010.
FHWA Systems Engineering Process for Intelligent Transportation Systems	U.S. Department of Transportation Federal Highway Administration (FHWA) <i>Systems Engineering Process for Intelligent Transportation Systems, Version 3.0</i> , November 2009.
Geotechnical Exploration Data Report	Klohn Crippen Berger Ltd. <i>Geotechnical Exploration Data Report – Draft</i> , February 5, 2019.
Guidelines for Landscaping and Site Restoration Near Burns Bog	RA Sims Environmental Scientist <i>Guidelines for Landscaping and Site Restoration Near Burns Bog</i> , January 25, 2019.
Heavy Metal Memorandum of Understanding	BC Ministry of Transportation and BC Ministry of Environment <i>Clarification of Independent Remediation Requirements for Selected Heavy Metals at Ministry of Transportation Active Roadway Sites</i> , July 11, 2001.
Highway 17 Winter Maintenance Specifications	Province, BCTFA and FTG Fraser Transportation Group Partnership <i>South Fraser Perimeter Road Concession Agreement, Section 8 [Winter Operation and Maintenance] of Appendix A to Schedule 5</i> , July 14, 2010.
Highway 91/17 Directional Signing Strategy	Highway 91/17 Directional Signing Strategy – Binnie <i>Directional Guide Signing Strategy – DRAFT Rev.0</i> , November 16, 2018.
Highway Capacity Manual	Transportation Research Board <i>Highway Capacity Manual, Sixth Edition: A Guide for Multimodal Mobility Analysis</i> , 2016.
Highway Maintenance Activities BMPs	BC Ministry of Transportation <i>Best Management Practices for Highway Maintenance Activities</i> , July 2004.
Instream Works – Standards and Best Practices	BC Ministry of Water, Land and Air <i>Standards and Best Practices for Instream Works</i> , March 2004.
Instream Work Windows	BC Ministry of Environment, Lower Mainland Region <i>Guidelines for Reduced Risk Instream Work Windows</i> , March 2006.
ITE Temporary Traffic Control Guidelines	Institute of Transportation Engineers <i>Guidelines for In-Service Road Safety Operational Review of Temporary Traffic Control</i> , 2004.
Land Capability Classification for Agriculture in British Columbia	Ministry of Environment and Ministry of Agriculture and Food <i>Land Capability Classification for Agriculture in British Columbia</i> , April 1983.
Land Development Guidelines	Department of Fisheries and Oceans Canada and Ministry of Environment, Lands and Parks <i>Land Development Guidelines for the Protection of Aquatic Habitat</i> , 1992.

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Short Form	Document Name
Landscape Policy and Design Standards	BC Ministry of Transportation <i>Landscape Policy and Design Standards</i> , 1991.
Maintenance Specifications - Service Area 6	BC Ministry of Transportation and Infrastructure <i>General Specifications and Local Area Specifications for Service Area 6</i> , October 2018.
Manual of Aesthetic Design Practice	BC Ministry of Transportation <i>Manual of Aesthetic Design Practice</i> , 1991.
Manual of Control of Erosion and Shallow Slope Movement	BC Ministry of Transportation <i>Manual of Control of Erosion and Shallow Slope Movement, Vancouver Island Highway Project</i> , August 22, 1997.
Manual of Standard Traffic Signs and Pavement Markings	BC Ministry of Transportation <i>Manual of Standard Traffic Signs and Pavement Markings</i> , September 2000.
Manual of Uniform Traffic Control Devices for Canada	Transportation Association of Canada <i>Manual of Uniform Traffic Control Devices for Canada</i> , 2014.
Metro Vancouver Ambient Air Quality Objectives	Metro Vancouver <i>Metro Vancouver Ambient Air Quality Objectives</i> , updated June 2018.
Metro Vancouver Stormwater Design Guidelines	Metro Vancouver <i>Stormwater Source Control Design Guidelines</i> 2012.
Ministry Jurisdictional Atlas	BC Ministry of Transportation <i>Lower Mainland – Howe Sound District Jurisdictional Atlas, Corporation of Delta and City of Richmond</i> .
MMCD	Master Municipal Construction Documents Association <i>MMCD Platinum Volume II – General Condition, Specifications, and Standard Detail Drawings</i> , 2009.
Noise Policy	BC Ministry of Transportation and Infrastructure <i>Policy for Assessing and Mitigating Noise Impacts from New and Upgraded Numbered Highways</i> , Revised October 27, 2016.
Nursery Stock Standards	Canadian Nursery Landscape Association <i>Canadian Standards for Nursery Stock</i> , 9th Edition, February 28, 2017.
Pedestrian Crossing Control Manual	BC Ministry of Transportation <i>Pedestrian Crossing Control Manual for British Columbia</i> , 1994.
Pile Driving BMPs	Department of Fisheries and Oceans Canada and BC Marine and Pile Driving Contractors Association <i>Best Management Practices for Pile Driving</i> , March 2003.
Project Communications and Engagement Plan	<i>Highway 91/17 Upgrade Project Communications and Engagement Plan</i> , January 2019
Protocols for Rare Plants Surveys	E-Flora BC: Electronic Atlas of the Plants of British Columbia [www.eflora.bc.ca] Lab for Advanced Spatial Analysis, Department of Geography, University of British Columbia <i>Protocols for Rare Vascular Plant Surveys</i> , 2008.
Raptor Conservation BMPs	Ministry of Forests, Lands and Natural Resource Operations and Ministry of Environment <i>Guidelines for Raptor Conservation during Urban and Rural Land Development in British Columbia</i> , 2013.
Recognized Products List	BC Ministry of Transportation <i>Recognized Products List</i> , January 1, 2019 Edition.
Riparian Revegetation Guidelines	Ministry of Environment, Lands and Parks <i>Planting Criteria and Recommended Native Tree and Shrub Species for Restoration and Enhancement of Fish and Wildlife Habitat</i> , 1998.
Road Safety Audit Guidelines	BC Ministry of Transportation <i>Road Safety Audit Guidelines</i> , April 1, 2004.

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Short Form	Document Name
Security Schedule	BC Ministry of Transportation and Infrastructure <i>Security Schedule</i> , August 2019.
Seismic Design Guidelines for Dikes	Ministry of Forests, Lands and Natural Resource Operations Flood Safety Section <i>Seismic Design Guidelines For Dikes 2nd Edition</i> , June 2014.
Specifications for Standard Highway Sign Materials, Fabrication and Supply	BC Ministry of Transportation <i>Specifications for Standard Highway Sign Materials, Fabrication and Supply</i> , July 2008.
Standard Electrical Equipment Maintenance Manual	BC Ministry of Transportation <i>DRAFT Maintenance Manual for Standard Electrical Equipment</i> , March 2001.
Standard Specifications for Highway Construction	BC Ministry of Transportation and Infrastructure <i>2016 Standard Specifications for Highway Construction</i> , July 2016.
Stormwater Management Plan	Ministry of Transportation and Infrastructure <i>Highway 91/17 and Deltaport Way Upgrade Project Stormwater Management Plan</i> , 2018
Structure Parameters for Delivery by Engineers-of-Record on Ministry Projects	South Coast Region, <i>Structure Parameters for Delivery by Engineers-of-Record on Ministry Projects</i> , December 11, 2008.
TAC Bikeway Traffic Control Guidelines	Transportation Association of Canada <i>Bikeway Traffic Control Guidelines for Canada</i> , 2012.
TAC Geometric Design Guide	Transportation Association of Canada <i>Geometric Design Guide for Canadian Roads</i> , 2017.
TAC Manual of Uniform Traffic Control Devices	Transportation Association of Canada <i>Manual of Uniform Traffic Control Devices for Canada</i> , 2014.
TAC Road Safety Audit Guide	Transportation Association of Canada <i>Canadian Road Safety Audit Guide</i> , 2001.
Technical Bulletin DS15001	BC Ministry of Transportation and Infrastructure <i>Design Vehicles – Over-Length Configurations</i> , Technical Bulletin DS15001.
Technical Bulletin DS13001	BC Ministry of Transportation and Infrastructure <i>Cable Barrier (Median and Roadside)</i> , Technical Bulletin DS13001.
Technical Bulletin TE-2000-03	BC Ministry of Transportation <i>Sign Illumination</i> , Technical Bulletin TE-2000-03.
Technical Bulletin TE-2000-12	BC Ministry of Transportation and Infrastructure <i>Preformed Detector Loops (PDF)</i> , Technical Bulletin TE-2000-12.
Technical Bulletin TE-2001-02	BC Ministry of Transportation <i>Advance Warning Sign Placement and Timing in Construction Zones</i> , Technical Bulletin TE-2001-02.
Technical Bulletin TE-2001-06	BC Ministry of Transportation <i>Clarification of the Use of Reflective Tape Borders on Traffic Signal Backboards</i> , Technical Bulletin TE-2001-06.
Technical Bulletin TE-2001-07	BC Ministry of Transportation <i>Vehicle Underpass Lighting</i> , Technical Bulletin TE-2001-07.
Technical Bulletin TE-2001-08	BC Ministry of Transportation <i>Design Criteria for All Cantilever, Sign Bridge and Custom Pole Structures</i> , Technical Bulletin TE-2001-08.
Technical Bulletin TE-2002-01	BC Ministry of Transportation <i>Audible Effects of High Visibility Delineation</i> , Technical Bulletin TE-2002-01.
Technical Bulletin TE-2002-03	BC Ministry of Transportation <i>Post Mounted Flasher Application</i> , Technical Bulletin TE-2002-03.
Technical Bulletin TE-2002-07	BC Ministry of Transportation <i>Interim Bicycle Guidelines for Traffic Signals</i> Technical Bulletin TE-2002-07.

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Short Form	Document Name
Technical Bulletin TE-2004-01	BC Ministry of Transportation <i>Revisions to Electrical and Traffic Engineering Manual (December 2003)</i> , Technical Bulletin TE-2004-01.
Technical Bulletin TE-2005-02	BC Ministry of Transportation <i>Revisions to Electrical and Traffic Engineering Manual (December 2003)</i> , Technical Bulletin TE-2005-02.
Technical Bulletin TE-2005-04	BC Ministry of Transportation <i>Web Camera Design, Installation and Commissioning Specifications</i> , Technical Bulletin TE-2005-04.
Technical Bulletin TE-2005-05	BC Ministry of Transportation <i>Lane Use Signs and Pavement Markings at Multi-Lane Roundabouts</i> , Technical Bulletin TE-2005-05.
Technical Bulletin TE-2005-07	BC Ministry of Transportation <i>Clarification of the Use of Green Arrow Signal Displays on Traffic Signals at Interchanges</i> , Technical Bulletin TE-2005-07.
Technical Bulletin TE-2005-09	BC Ministry of Transportation <i>Revisions to Electrical and Traffic Engineering Manual (December 2003)</i> , Technical Bulletin TE-2005-09.
Technical Bulletin TE-2006-01	BC Ministry of Transportation <i>Uninterruptible Power Supplies (UPS) at Signalized Intersections and at Traffic Control or Warning Devices Interconnected with Railways</i> , Technical Bulletin TE-2006-01.
Technical Bulletin TE-2006-02	BC Ministry of Transportation and Infrastructure <i>Initiation of Ministry of Transportation Cellular Communication Accounts (PDF)</i> , Technical Bulletin TE-2006-02
Technical Bulletin TE-2006-03	BC Ministry of Transportation <i>Traffic Signal Uninterruptible Power Supply Material Standards</i> , Technical Bulletin TE-2006-03.
Technical Bulletin TE-2006-04	BC Ministry of Transportation <i>Traffic Signal Uninterruptible Power Supply Maintenance Standards</i> , Technical Bulletin TE-2006-04.
Technical Bulletin TE-2006-05	BC Ministry of Transportation <i>Use of Countdown Pedestrian Signals</i> , Technical Bulletin TE-2006-05.
Technical Bulletin TE-2007-02	BC Ministry of Transportation <i>Traffic Signal/Railway Signal Interconnects</i> , Technical Bulletin TE-2007-02.
Technical Bulletin TE-2007-03	BC Ministry of Transportation <i>Communication Conduit</i> , Technical Bulletin TE-2007-03.
Technical Bulletin TE-2007-04	BC Ministry of Transportation and Infrastructure <i>Priority Assessment for Wire Theft Deterrent Treatment for New Designs and Projects in the Construction Phase (PDF)</i> , Technical Bulletin TE-2007-04
Technical Bulletin TE-2008-01	BC Ministry of Transportation and Infrastructure <i>Uninterruptible Power Supplies (UPS) at Signalized Intersections and at Traffic Control or Warning Devices Interconnected with Railways (PDF)</i> , Technical Bulletin TE-2008-01.
Technical Bulletin TE-2009-01	BC Ministry of Transportation and Infrastructure <i>Replacement of Type III Sag Glass Luminaire Fixtures with Type III Flat Glass Luminaire Fixtures (PDF)</i> , Technical Bulletin TE-2009-01.
Technical Bulletin TE-2009-02	BC Ministry of Transportation and Infrastructure <i>Supply of Pedestrian Pushbuttons (PDF)</i> , Technical Bulletin TE-2009-02.
Technical Bulletin TE-2010-01	BC Ministry of Transportation and Infrastructure <i>Alignment Pins and Holes on Small Round Plastic Junction Boxes (PDF)</i> , Technical Bulletin TE-2010-01.
Technical Bulletin TE-2010-02	BC Ministry of Transportation and Infrastructure <i>Service Disconnect Switches on BC Hydro Poles (PDF)</i> , Technical Bulletin TE-2010-02.

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Short Form	Document Name
Technical Bulletin TE-2011-01	BC Ministry of Transportation and Infrastructure <i>Use of 'Canadian Melody' Audible Pedestrian Signals (PDF)</i> , Technical Bulletin TE-2011-01.
Technical Bulletin TE-2012-01	BC Ministry of Transportation and Infrastructure <i>Use of Aluminum Electrical Conductions (PDF)</i> , Technical Bulletin TE-2012-01.
Technical Bulletin TE-2012-04	BC Ministry of Transportation and Infrastructure <i>Wire Theft Prevention Strategies (PDF)</i> , Technical Bulletin TE-2012-04.
Technical Bulletin TE-2012-05	BC Ministry of Transportation and Infrastructure <i>Use of 300 mm Flashing Beacons on Signs (PDF)</i> , Technical Bulletin TE-2012-05.
Technical Bulletin TE-2012-06	BC Ministry of Transportation and Infrastructure <i>Amendment to TE-2005-04: 'Web Camera Design, Installation, and Commissioning Specifications' RE: Mounting Cameras on Frangible & Breakaway Bases (PDF)</i> , Technical Bulletin TE-2012-06.
Technical Bulletin TE-2013-01	BC Ministry of Transportation and Infrastructure <i>Operation of No-Left-Turn and No-Right-Turn Blank-Out Signs During Rail Pre-emption (PDF)</i> , Technical Bulletin TE-2013-01.
Technical Bulletin TE-2013-02	BC Ministry of Transportation and Infrastructure <i>Countdown Pedestrian Signals (PDF)</i> , Technical Bulletin TE-2013-02.
Technical Bulletin TE-2015-01	BC Ministry of Transportation and Infrastructure <i>Installation of Pre-emption Indicating Lights with Type P6 Traffic Controller Cabinets (PDF)</i> , Technical Bulletin TE-2015-01.
Technical Bulletin TE-2015-02	BC Ministry of Transportation and Infrastructure <i>Transition to LED Roadway Lighting (PDF)</i> , Technical Bulletin TE-2015-02.
Technical Bulletin TE-2016-02	BC Ministry of Transportation and Infrastructure <i>Installation of Radar Vehicle Detection Sensors (PDF)</i> , Technical Bulletin TE-2016-02.
Technical Bulletin TE-2016-03	BC Ministry of Transportation and Infrastructure <i>Installation of Rectangular Rapid Flashing Beacons (PDF)</i> , Technical Bulletin TE-2016-03.
Technical Bulletin TE-2016-04	BC Ministry of Transportation and Infrastructure <i>Installation of Speed Reader Boards</i> , Technical Bulletin TE-2016-04.
Technical Bulletin TE-2016-05	BC Ministry of Transportation and Infrastructure <i>Installation of Bluetooth Readers (PDF)</i> , Technical Bulletin TE-2016-05.
Technical Bulletin TE-2016-06	BC Ministry of Transportation and Infrastructure <i>Installation of Illuminated Bollards (PDF)</i> , Technical Bulletin TE-2016-06.
Technical Bulletin TE-2016-07	BC Ministry of Transportation and Infrastructure <i>Installation of Microwave (Wi-Fi) Radios (PDF)</i> , Technical Bulletin TE-2016-07.
Technical Bulletin TE-2016-08	BC Ministry of Transportation and Infrastructure <i>Electrical Power Meters for MoTI Services (PDF)</i> , Technical Bulletin TE-2016-08.
Technical Bulletin TE-2017-01	BC Ministry of Transportation and Infrastructure <i>LED Roadway Lighting Fixture Procurement (PDF)</i> , Technical Bulletin TE-2017-01.
Technical Bulletin TE-2018-02	BC Ministry of Transportation and Infrastructure <i>Interim ITS Field Network Switches Procurement</i> , Technical Bulletin TE-2018-02.
Technical Bulletin TE-2018-03	BC Ministry of Transportation and Infrastructure <i>NEMA TSI Traffic Controller Cabinet Rehabilitation Program</i> , Technical Bulletin TE-2018-03.
Technical Circular T-01/06	BC Ministry of Transportation <i>Text Based "Do Not Enter" and "Wrong Way" Signs – Application at Interchanges</i> , February 15, 2006.

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Short Form	Document Name
Technical Circular T-01/15	BC Ministry of Transportation and Infrastructure <i>Pavement Structure Design Guidelines</i> , January 26, 2015.
Technical Circular T-01/16	BC Ministry of Transportation and Infrastructure <i>Introduction of the 2015 Interim Traffic Management Manual for Work on Roadways</i> , March 1, 2016.
Technical Circular T-02/02	BC Ministry of Transportation <i>Manual of Standard Traffic Signs & Pavement Markings</i> , February 1, 2002.
Technical Circular T-02/04	BC Ministry of Transportation <i>Road Safety Audit (RSA) Policy</i> , March 8, 2004 and <i>Clarification Road Safety Audit (RSA) Policy</i> , March 17, 2004.
Technical Circular T-02/09	BC Ministry of Transportation and Infrastructure <i>Temporary Pavement Markings</i> , January 6, 2009.
Technical Circular T-02/10	BC Ministry of Transportation and Infrastructure <i>New Computer Aided Drafting Standards</i> , March 1, 2010.
Technical Circular T-02/12	BC Ministry of Transportation and Infrastructure <i>Guidelines on the Use of Speed Reader Boards (SRB) in Work Zones</i> , April 26, 2012.
Technical Circular T-02/13	BC Ministry of Transportation and Infrastructure <i>Cable Barrier</i> , August 7, 2013.
Technical Circular T-03/02	BC Ministry of Transportation <i>Policy on Accommodating Persons with Disabilities</i> , October 15, 2002.
Technical Circular T-03/07	BC Ministry of Transportation <i>Sign Sheeting Materials</i> , August 7, 2007.
Technical Circular T-03/14	BC Ministry of Transportation and Infrastructure <i>Update to the Ministry of Transportation and Highways Utility Policy Manual (1995)</i> , May 6, 2014.
Technical Circular T-04/17	BC Ministry of Transportation and Infrastructure <i>Geotechnical Design Criteria</i> , March 22, 2017
Technical Circular T-04/18	BC Ministry of Transportation and Infrastructure <i>Update to the Ministry's Electrical and Traffic Engineering Design Guidelines - Section 400 regarding Pedestrian Operations</i> , September 5, 2018.
Technical Circular T-05/17	BC Ministry of Transportation and Infrastructure <i>Use of Reclaimed Asphalt Pavement in Construction and Paving Projects</i> , July 20, 2017
Technical Circular T-05/18	BC Ministry of Transportation and Infrastructure <i>Design Exception Process</i> , September 24, 2018.
Technical Circular T-06/08	BC Ministry of Transportation <i>Roundabout Policy (update)</i> , November 12, 2008.
Technical Circular T-06/09	BC Ministry of Transportation and Infrastructure <i>Engineer of Record and Field Review Guidelines</i> , July 30, 2009.
Technical Circular T-06/14	BC Ministry of Transportation <i>Policy for New Keep Right Signing and Pavement Marking for Multi-lane Highways and Passing/Climbing Lanes on Two Lane Highways</i> , September 2014.
Technical Circular T-06/15	BC Ministry of Transportation <i>Climate Change and Extreme Weather Event Preparedness and Resilience in Engineering Infrastructure Design</i> , June 22, 2015.
Technical Circular T-07/05	BC Ministry of Transportation <i>Signing and Markings for Multi-lane Roundabouts</i> , July 27, 2005.
Technical Circular T-07/09	BC Ministry of Transportation and Infrastructure <i>Record Drawings</i> , April 21, 2010.

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Short Form	Document Name
Technical Circular T-07/17	BC Ministry of Transportation and Infrastructure <i>C-035 CONSTRUCTION PROJECT SIGNS (November 2017 Update)Bilingual Federal C-035 Signs</i> , November 21, 2017.
Technical Circular T-10/05	BC Ministry of Transportation <i>Policy Manual for Supplemental Signs</i> , October 21, 2005.
Technical Circular T-12/06	BC Ministry of Transportation and Infrastructure <i>Review of Roundabouts by the Chief Engineer's Office</i> , September 5, 2006.
Technical Circular T-15/06	BC Ministry of Transportation <i>New Standards for Sign Fonts (Clearview Type Font) and Update to Sheeting reflectivity standards on Guide and Custom Signs (ASTM Type 9/3 and ASTM Type 9/9)</i> , September 5, 2006.
Technical Circular T-16/06	BC Ministry of Transportation <i>Guidelines for the Operation of Changeable Message Signs (CMSs) and Portable Changeable Message Signs (PCMSs)</i> , October 19, 2006.
Technical Guidance on Contaminated Sites	BC Ministry of Environment and Climate Change Strategy <i>Technical Guidance on Contaminated Sites, Version 2.0</i> , November 1, 2017.
Traffic Management Guidelines for Work on Roadways	BC Ministry of Transportation and Infrastructure <i>Traffic Management Guidelines for Work on Roadways</i> , 2011
Traffic Management Manual	BC Ministry of Transportation <i>Interim Traffic Management Manual for Work on Roadways</i> , 2015 Office Edition.
Traffic Operations Addendum #1	R.F. Binnie & Associates Ltd. <i>Industrial Developments Traffic Operations Memorandum – DRAFT Rev.1</i> , April 2019.
Traffic Operations Addendum #2	R.F. Binnie & Associates Ltd. <i>Highway 91 SB to Nordel Way EB Traffic Operations Memorandum – FINAL Rev.0</i> , May 2019.
Traffic Operations Memo	R.F. Binnie & Associates Ltd. <i>VISSIM Methodology and Traffic Operations Requirements Memorandum – FINAL Rev.0</i> , November 2018.
TransLink Bus Infrastructure Design Guidelines	TransLink <i>Bus Infrastructure Design Guidelines</i> , September 2018.
Transport Canada Railway Clearance Standard	Transport Canada <i>Standard Respecting Railway Clearance</i> , May 1992.
Tree Replacement Criteria	Ministry of Environment, Lands and Parks, Lower Mainland Region, <i>Tree Replacement Criteria</i> , 1996.
TS2 Traffic Controller Assembly Manual	BC Ministry of Transportation and Infrastructure, <i>TS2 Traffic Controller Assembly Manual</i> , July 2016.
Utility Policy Manual	BC Ministry of Transportation <i>Utility Policy Manual</i> , 1998.
Water Quality Guidelines - Approved	BC Ministry of Environment <i>British Columbia Approved Water Quality Guidelines</i> , 2006 Edition.
Water Quality Guidelines – Working	BC Ministry of Environment <i>British Columbia Working Water Quality Guidelines</i> , 2006 Edition.
Wildlife at Risk – EA Best Practice Guide	Canadian Wildlife Service – Environment Canada <i>Environmental Assessment Best Practice Guide for Wildlife at Risk in Canada</i> , February 2004.

**APPENDIX B
FACTUAL GEOTECHNICAL DATA**

Data Room Category Number	Author	Report Title or File Name and Date	Factual Geotechnical Data
900	Klohn Crippen Berger Ltd.	Highway 91/17 Upgrade Project, Geotechnical Exploration Data Report DRAFT - February 5, 2019	<p>Report – Drill Hole locations, elevations and termination depths</p> <p>Figures – None</p> <p>Appendix I – Mud Rotary and Solid Stem Auger Hole Logs all EXCEPT for:</p> <ul style="list-style-type: none"> • Columns entitled: “Soil Symbol”, “Soil Description”, “Classification”, and “Comments” • Values and plots for SPT “N” <p>Appendix II – Records of Seismic Cone Penetration Testing all EXCEPT for plots of “R_f”, “SBT”, “S_u”, “V_s”, and “N₆₀” and columns entitled “Characteristic Arrival Time”, “Incremental Time Interval”, and “Interval Velocity”.</p> <p>Appendix III –Dynamic Cone Penetration Test Logs all EXCEPT for the columns entitled: “Comments”</p> <p>Appendix IV – Laboratory Testing Results all EXCEPT for:</p> <ul style="list-style-type: none"> • All table columns entitled “Remarks” in Fines Content of Soil test results • All columns entitled “Notes” in Water Content of Soil test results • All charts labeled “Plasticity Chart” and all table columns entitled “Remarks/Sample Description” in Atterberg Limits test results • All Void Ratio vs. Consolidation Stress plots in Consolidation Test results • All table columns entitled “Change in Void Ratio”, “Change in Void Ratio Acc”, “Void Ratio”, t_{50*}”, “C_v”, “M_v”, “k”, and “C_c” in Consolidation Test Results. All values presented for “Initial Void Ratio” and “Void Ratio Factor” in Consolidation Test results <p>Appendix V – Standard Penetration Test Hammer Energy Transfer Ratio Measurements all EXCEPT for:</p> <ul style="list-style-type: none"> • Columns entitled “Field N”, “N60”, and “AVG ETR%” in Table 2 • Columns entitled “EVF” and “ETR” in Appendix A • Columns entitled “N60 Value”, “Average BPM”, “Average EFV”, and “Average ETR”

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APPENDIX C
BACKGROUND IP AND THIRD PARTY IP

Nil

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REPRESENTATIVES, REVIEW PROCEDURE AND CONSENT PROCEDURE**

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**PART 1
PROVINCE'S REPRESENTATIVE**

1.1 Appointment of Province's Representative

- (a) The Province, by notice to the Design-Builder delivered pursuant to Schedule 19 [Closing Deliveries] shall appoint the Province's Representative to act as its agent in relation to the Project, including in relation to Design, Construction and all other aspects of the Project Work. The Province's Representative shall be entitled to exercise the functions set out in Section 1.3 [Functions of Province's Representative] of this Schedule.
- (b) During any period when there is no Province's Representative, the functions which would otherwise be performed by the Province's Representative shall be carried out by such other person as the Province may designate by notice to the Design-Builder, and such other person shall be treated in all respects as the Province's Representative under this Agreement during such period. The Province shall use all reasonable efforts to give reasonable advance notice of any such designation to the Design-Builder where practicable.
- (c) Except as expressly stated in this Agreement, the Province's Representative does not have any authority to relieve the Design-Builder of any of its obligations under this Agreement or any other Province Project Document.
- (d) The Design-Builder and the Design-Builder's Representative, except as otherwise notified by the Province to the Design-Builder and subject to Section 1.1(e) of this Schedule, are entitled to treat any act of the Province's Representative which is authorized by this Agreement or any other Province Project Document as being expressly authorized by the Province, and shall not be required to determine whether any express authority has in fact been given.
- (e) Any decision by the Province's Representative is specific to the circumstances to which it relates, and shall not be construed as binding on, or limiting any other decision to be made by, the Province's Representative, whether in the same or similar circumstances or otherwise.
- (f) In the exercise of any of its functions the Province's Representative may:
 - (i) refer any matter to the Province or any other person contemplated in Section 2.3 [Referral by Province's Representative] of this Schedule for advice or determination;
 - (ii) rely upon any advice received or determination made following a reference pursuant to Section 1.1(f)(i) of this Schedule;
 - (iii) rely on any other advice that the Province's Representative considers necessary or appropriate in the circumstances; and
 - (iv) designate any other person to attend any inspection, test or other activity that is permitted to be attended by the Province's Representative under the terms of this Agreement.

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- (g) The Province's Representative shall work together with the Design-Builder's Representative in the spirit of partnering and cooperation.

1.2 Change of Province's Representative

The Province may at any time and from time to time by notice to the Design-Builder terminate the appointment of any Province's Representative or appoint one or more substitute Province's Representatives. Any such notice shall specify the effective date of such termination or substitution, and the Province shall use all reasonable efforts to give reasonable advance notice of any such appointment to the Design-Builder where practicable.

1.3 Functions of Province's Representative

The functions which may be performed by the Province's Representative under this Agreement include the following:

- (a) monitor the Project, and the Design-Builder's performance of the Project Work in accordance with the Project Requirements, by any means, including the system of inspection, testing, surveys, certification, review and audits set out in this Agreement, including in Part 11 [Province's Access, Monitoring and Step-In Rights], Schedule 4 [Design and Construction], Schedule 7 [Quality Management] and Schedule 17 [Records and Reports];
- (b) attend site and other progress and technical meetings (including in the company of such other Province representatives, consultants, contractors and/or advisors as the Province's Representative considers appropriate) and receive and review minutes and reports;
- (c) monitor and review the obtaining and, where applicable, renewal or extension by the Design-Builder of Permits pursuant to Section 4.18 [Permits], and the compliance by the Design-Builder with Laws, Permits and the Requirements of Interested Parties;
- (d) request Province Changes, including Minor Works, in accordance with Section 7.1 [Province Changes], receive and consider the Design-Builder Proposals, including Minor Works, in accordance with Section 7.2 [Design-Builder Proposals], and negotiate and make all consequential decisions on behalf of the Province, including countersign Change Certificates under Schedule 11 [Changes], in respect of such Province Changes and the Design-Builder Proposals;
- (e) make and receive claims of Supervening Events pursuant to Part 8 [Supervening Events], and negotiate and make all consequential decisions on behalf of the Province in respect of such claims;
- (f) monitor the performance by the Design-Builder of the Design-Builder's Environmental Obligations;
- (g) audit and monitor the Design-Builder's Quality Management System;
- (h) inspect and audit the Records;

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- (i) monitor the performance by the Design-Builder of all of its other requirements under this Agreement, including the Indigenous Requirements;
- (j) perform all such functions as may be ascribed to the Province's Representative under this Agreement or any other Province Project Document, or otherwise under the Project Requirements;
- (k) receive and deal with all matters submitted to the Review Procedure or the Consent Procedure pursuant to any provision of this Agreement or any other Province Project Document or otherwise under the Project Requirements;
- (l) perform any other functions under this Agreement or any other Province Project Document or otherwise under the Project Requirements, which are to be carried out by the Province; and
- (m) perform such other functions in respect of this Agreement or any other Province Project Document as the Province may notify to the Design-Builder from time to time.

**PART 2
REVIEW PROCEDURE AND CONSENT PROCEDURE**

2.1 Review Procedure

- (a) Any proposed document (including any Design Data) or proposed course of action on the part of the Design-Builder which, under the terms of this Agreement or any other Province Project Document, either:
 - (i) is expressly required to be submitted to the Province's Representative pursuant to the Review Procedure or to the Province's Representative for review in accordance with or pursuant to the Review Procedure; or
 - (ii) unless the parties agree otherwise, in the case of Schedule 4 [Design and Construction], Schedule 6 [Environmental Obligations] or Schedule 7 [Quality Management], is required to be submitted to the Province's Representative for consideration, without specifying whether such submission is to be under the Review Procedure or the Consent Procedure,

shall be submitted to the Province's Representative accompanied by the proposed document (including any Design Data) or statement of a proposed course of action, and the following procedures (together, the "**Review Procedure**") shall apply (provided, in the case of any document or proposed course of action submitted to the Review Procedure in accordance with the Design and Certification Procedure, any specific procedures set out therein shall also apply).

- (b) The Province's Representative shall as soon as practicable and, subject to Section 2.4 [Request for Further Information] of this Schedule, in any event within 14 days of actual receipt thereof (or such other period as may be specified in this Agreement or other Province Project Document, as the case may be, for any particular case) return one copy of the relevant submission document endorsed "received" or (subject to Sections 2.5 [Objection or Rejection in Province's Discretion] and 2.6 [General Grounds for Objection

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or Rejection] of this Schedule, as applicable in each case) “received with comments” or “comments”. In the case of any submission document returned endorsed “received with comments” or “comments”, the Province’s Representative shall also provide with such returned document such comments.

- (c) The Design-Builder may proceed to implementation in the case of a submission document endorsed “received”.
- (d) The documents or proposed course of action accompanying a submission document returned endorsed “received with comments” shall be amended by the Design-Builder in accordance with such comments (but need not be re-submitted to the Province’s Representative except by their issuance to the Province’s Representative pursuant to Section 2.1(i) of this Schedule) and once so amended the Design-Builder shall proceed to implementation subject to Section 2.9 [Early Commencement of Work] of this Schedule unless the Design-Builder disputes that any such comment is on grounds permitted by Section 2.6 [General Grounds for Objection or Rejection] of this Schedule if applicable to such submission document, in which case the Design-Builder may refer the matter to the Dispute Resolution Procedure within 10 days of the Design-Builder’s receipt of such comments but not thereafter. If it is then resolved in accordance with the Dispute Resolution Procedure that any such comment was not on such permitted grounds, then such submission document will thereupon be deemed to have been endorsed “received” and otherwise such submission document shall thereupon be revised and implemented by the Design-Builder pursuant to this Section 2.1. If the matter is not referred by the Design-Builder to the Dispute Resolution Procedure within such 10 day period, the Design-Builder shall be deemed to have accepted the comments of the Province’s Representative and such submission document shall thereupon be revised and implemented by the Design-Builder pursuant to this Section 2.1.
- (e) The documents or proposed course of action accompanying a submission document returned endorsed “comments” shall be revised by the Design-Builder and re-submitted to the Province’s Representative pursuant to this Section 2.1 within 14 days of the Design-Builder’s receipt of such comments (or such other time period as agreed in writing by the Province’s Representative), together with the relevant submission document, unless the Design-Builder disputes that any such comment is on grounds permitted by Section 2.6 [General Grounds for Objection or Rejection] of this Schedule if applicable to such submission document, in which case the Design-Builder may refer the matter to the Dispute Resolution Procedure within 10 days of the Design-Builder’s receipt of such comments but not thereafter. If it is then resolved in accordance with the Dispute Resolution Procedure that any such comment was not on such permitted grounds, then such submission document will thereupon be deemed to have been endorsed “received” and otherwise such submission document shall thereupon be revised and re-submitted by the Design-Builder pursuant to this Section 2.1. If the matter is not referred by the Design-Builder to the Dispute Resolution Procedure within such 10 day period, the Design-Builder shall be deemed to have accepted the comments of the Province’s Representative and such submission document shall thereupon be revised and re-submitted by the Design-Builder pursuant to this Section 2.1.
- (f) If, subject to Section 2.4 [Request for Further Information] of this Schedule, the Province’s Representative fails to return any such submission document (including any

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re-submitted submission document) duly endorsed within 14 days of actual receipt thereof (or such other period as may be specified in this Agreement or other Province Project Document, as the case may be, for any particular case), then it shall be deemed to have returned such submission document to the Design-Builder marked “received”.

- (g) A reference in this Agreement or other Province Project Document to there being “no objection” under the Review Procedure in relation to a particular matter means that such matter has been submitted in accordance with the provisions of this Section 2.1 and returned (or deemed returned) with an endorsement of “received” or returned with an endorsement of “received with comments”, in the latter case the matter having been amended in accordance with such comments.
- (h) Documents or courses of action the subject of a submission pursuant to this Section 2.1 and returned (or deemed returned) endorsed:
 - (i) “received” shall be adhered to; or
 - (ii) “received with comments” shall, once amended in accordance with the comments, be adhered to,

except to the extent that there has been no objection to any subsequent change or amendment thereto submitted in accordance with this Section 2.1.

- (i) The Design-Builder shall ensure that two copies and electronic versions of all documents, including all drawings, numbered appendices, specifications and schedules, that have been modified by the Design-Builder in accordance with the Review Procedure are issued to the Province’s Representative, prior to the commencement of any Project Work to which such documents relate, except in the circumstances provided for in Section 2.8 [Early Commencement of Project Work] of this Schedule.
- (j) Once all applicable disputes arising in respect of any decision made by the Province’s Representative under the Review Procedure have been resolved in accordance with this Section 2.1, such decision shall, subject only to Section 2.13(a)(iii), be final.

2.2 Consent Procedure

- (a) Any proposed document or proposed course of action on the part of the Design-Builder which, under the terms of this Agreement or other Province Project Document, is required to be submitted to the Province’s Representative pursuant to the Consent Procedure or to the Province’s Representative for consent in accordance with or pursuant to the Consent Procedure, shall be submitted to the Province’s Representative, accompanied by the proposed document or statement of a proposed course of action, and the following procedures (together, the “**Consent Procedure**”) shall apply.
- (b) The Province’s Representative shall as soon as practicable and, subject to Section 2.4 [Request for Further Information] of this Schedule, in any event within 30 days of actual receipt thereof (or such other period as may be specified in this Agreement or other Province Project Document, as the case may be, for any particular case) return one copy of the relevant submission document endorsed “accepted” or (subject to Sections 2.5 [Objection or Rejection in Province’s Discretion] or 2.6 [General Grounds for Objection

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or Rejection] of this Schedule as applicable in each case) “rejected”. In the case of any submission document returned endorsed “rejected”, the Province’s Representative shall also provide with such returned document the grounds for such rejection.

- (c) The Province’s Representative shall have the right at its option to impose conditions to the acceptance of a submission document pursuant to Section 2.2(b) of this Schedule, which conditions shall be required to be reasonable having regard to the relevant circumstances save in the case of an acceptance to which Section 2.5 [Objection or Rejection in Province’s Discretion] of this Schedule applies.
- (d) The Design-Builder may proceed to implementation in the case of a submission document endorsed “accepted” and such implementation must be in accordance with any conditions imposed pursuant to Section 2.2(c) of this Schedule unless, where conditions have been imposed by the Province’s Representative pursuant to s. 2.2(c) of this Schedule, the Design-Builder disputes the reasonableness of any condition imposed in which case the Design-Builder may refer the matter to the Dispute Resolution Procedure within 10 days of the Design-Builder’s receipt of such acceptance with conditions but not thereafter. If the matter is not referred by the Design-Builder to the Dispute Resolution Procedure within such 10 day period, the Design-Builder shall be deemed to have accepted the conditions of the Province’s Representative and such submission document shall then only be implemented in accordance with the conditions imposed by the Province’s Representative.
- (e) Unless otherwise specified in this Agreement or other Province Project Document, as the case may be, for any particular case, the documents or proposed course of action accompanying a submission document endorsed “rejected” shall not be implemented by the Design-Builder unless revised by the Design-Builder and re-submitted to the Province’s Representative pursuant to this Section 2.2 within 14 days of the Design-Builder’s receipt of such rejection (or such other time period as agreed in writing by the Province’s Representative) together with the relevant submission document and it is subsequently returned endorsed “accepted”.
- (f) In the case of a submission endorsed “rejected”, if the Design-Builder disputes that any such rejection (including a deemed rejection pursuant to Section 2.2(g) of this Schedule) is on grounds permitted by Section 2.6 [General Grounds for Objection or Rejection] of this Schedule, if applicable to such submission document, the Design-Builder may refer the matter to the Dispute Resolution Procedure within 10 days of the Design-Builder’s receipt of such rejection but not thereafter. If it is then resolved in accordance with the Dispute Resolution Procedure that any such rejection or deemed rejection:
 - (i) was not on such permitted grounds, then such submission document will thereupon be deemed to have been endorsed “accepted”, and the rejection or deemed rejection of such submission document on grounds that were not such permitted grounds shall constitute a Compensation Event and the provisions of Part 8 [Supervening Events] shall apply; or
 - (ii) was on such permitted grounds, then such submission document shall not be implemented by the Design-Builder unless revised by the Design-Builder and re-submitted to the Province’s Representative pursuant to this Section 2.2 and subsequently returned endorsed “accepted”.

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If the matter is not referred by the Design-Builder to the Dispute Resolution Procedure within such 10 day period, the Design-Builder shall be deemed to have accepted the rejection and such submission document shall not be implemented by the Design-Builder unless revised by the Design-Builder and re-submitted to the Province's Representative pursuant to this Section 2.2 and subsequently returned endorsed "accepted".

- (g) If, subject to Section 2.4 [Request for Further Information] of this Schedule, the Province's Representative fails to return any such submission document (including any re-submitted submission document) duly endorsed within 30 days of actual receipt thereof (or such other period as may be specified in this Agreement or other Province Project Document, as the case may be, for any particular case), then it shall be deemed to have returned such submission document to the Design-Builder marked "rejected", and such rejection shall be deemed to have been made by the Province's Representative in reliance upon grounds set out in Sections 2.5 [Objection or Rejection in Province's Discretion] and 2.6 [General Grounds for Objection or Rejection] of this Schedule as applicable to such submission document.
- (h) Documents or courses of action the subject of a submission pursuant to this Section 2.2 and returned (or deemed returned) endorsed "accepted", including any conditions imposed by the Province's Representative under Section 2.2(c) of this Schedule, shall be adhered to, except to the extent that there has been "acceptance" of any subsequent change or amendment thereto submitted in accordance with this Section 2.2.
- (i) The Design-Builder shall ensure that two copies and electronic versions of all documents, including all drawings, numbered appendices, specifications and schedules, that have been modified by the Design-Builder in accordance with the Consent Procedure are issued to the Province's Representative prior to the commencement of any Project Work to which such documents relate.
- (j) Once all applicable disputes arising in respect of any decision made by the Province's Representative under the Consent Procedure have been resolved in accordance with this Section 2.2, such decision shall, subject only to Section 2.13(a)(iii), be final.

2.3 Referral by Province's Representative

The Province's Representative may, in reviewing and dealing with any matter, refer such matter to the Province or any of its employees, agents, advisors, consultants, or contractors or subcontractors of any tier, and any review, consideration, decision, belief, opinion or determination referred to herein in relation to the Province's Representative may be that of the Province's Representative or any such person upon whose review, consideration, decision, belief, opinion or determination the Province's Representative relies. The Province's Representative may also, by written notice to the Design-Builder from time to time, designate an employee, advisor, consultant, contractor or other person to whom any specific submission or class of submissions is to be delivered by the Design-Builder and the Design-Builder shall comply with any such designation in making submissions under the Review Procedure and the Consent Procedure, as applicable, and, where a submission is delivered in accordance with any such designation, shall provide the Province's Representative with a copy of the transmittal of the submission to the designated person at the same time as the submission is delivered to that person.

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2.4 Request for Further Information

- (a) The Province's Representative, acting reasonably and without unreasonable delay, may request in writing, and if so requested the Design-Builder shall promptly and in any event no later than 21 days following such request submit, any further or other information, data and documents which may be reasonably required by the Province's Representative for a full appreciation of a submission under Section 2.1 [Review Procedure] or Section 2.2 [Consent Procedure] of this Schedule and its implications, and shall take all such steps as may be reasonably required to satisfy the Province's Representative that the proposed document or proposed course of action complies with this Agreement or other Province Project Document, as the case may be, and is appropriate.
- (b) If the Province's Representative makes a written request for further or other information, data or documents under this Section 2.4, then the time periods referred to in Section 2.1 [Review Procedure] or Section 2.2 [Consent Procedure] of this Schedule, as the case may be, shall not commence to run until such time as the Design-Builder has submitted the requested information, data or documents to the Province's Representative in satisfaction of the request.

2.5 Objection or Rejection in Province's Discretion

Subject to Sections 2.6 [General Grounds for Objection or Rejection] of this Schedule, or as may otherwise be expressly provided in this Agreement or other Province Project Document, the Province's Representative may make comments in relation to or reject, as applicable, any Review Procedure or Consent Procedure submission in its discretion.

2.6 General Grounds for Objection or Rejection

If any provision of this Agreement or other Province Project Document expressly provides that the Province's Representative will act reasonably or not act unreasonably in granting its approval or consent with respect to a submission, the Province's Representative may make comments in relation to or reject, as applicable, any Review Procedure or Consent Procedure submission on any one or more of the following grounds:

- (a) that the Design-Builder has not provided all information, data and documents required (including any information, data and documents required by the Province's Representative pursuant to Section 2.4 [Request for Further Information] of this Schedule) in respect of such submission;
- (b) that the adoption of the proposed document or proposed course of action would or might reasonably be expected to:
 - (i) conflict or be inconsistent with the statutory, public or other duties or functions of the Province or BCTFA;
 - (ii) give rise to a breach, or be in breach, of any Laws;
 - (iii) not satisfy, comply with or conform to any provision or requirement set out in this Agreement or any other Project Document;

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- (iv) not satisfy, comply with or conform to Good Industry Practice;
 - (v) materially and adversely affect the ability of the Design-Builder to perform any of its obligations under this Agreement or under any other Project Document and/or materially and adversely affect any right or obligation of the Province under this Agreement or any other Province Project Document or the ability of the Province to enforce any such right or perform any such obligation; or
 - (vi) materially and adversely affect the risks or costs to which the Province is exposed in respect of the Project;
- (c) any other grounds applicable to the submission that are expressly set out in this Agreement; or
 - (d) any other reasonable grounds,

and the Province's Representative shall always be entitled to make such comments or reject, as the case may be, on the foregoing grounds notwithstanding any other provision in this Agreement or any other Province Project Document.

2.7 Optional Standards

- (a) If any Ministry Standard or other standards or specifications which are incorporated into the Project Requirements contain options from which a choice can be made, any choice by the Design-Builder of any one option set out therein shall satisfy the Project Requirements in that regard, and the Province's Representative shall not object to the choice of such option on that basis, unless any such option is otherwise excluded or limited by the terms of the Project Requirements.
- (b) If following a choice by the Design-Builder in accordance with Section 2.7(a) of this Schedule, as expressed or reflected in a submission to the Province's Representative, the Province's Representative requires another such option to be adopted which the Design-Builder has not chosen, the Province's Representative shall request a Province Change under Section 7.1 [Province Changes].

2.8 Early Commencement of Project Work

- (a) The Design-Builder may proceed with a component of the Project Work which is the subject of a submission under the Review Procedure prior to the completion of the Review Procedure in accordance with Section 2.1 [Review Procedure] of this Schedule, provided that:
 - (i) in the case of any Construction, the requirements set out in Section 2.13 [No Construction] of Part 3 of Schedule 4 shall have been satisfied in respect of such component of the Project Work; and
 - (ii) in all cases, any such action shall be taken at the sole risk of the Design-Builder and the Design-Builder shall in any event remain responsible for complying with the outcome of the Review Procedure, once it is completed in accordance with Section 2.1 [Review Procedure] of this Schedule, at the Design-Builder's sole

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cost and expense, including any and all reconstruction, alterations, modifications or other remedial work to the Project Work already completed as may be necessary to comply with such outcome.

- (b) In no circumstances shall the Design-Builder proceed with any component of the Project Work in respect of which a submission has been made under the Consent Procedure (including where the Project Work involves providing such submission to a Governmental Authority) prior to the completion of the Consent Procedure in accordance with Section 2.2 [Consent Procedure] of this Schedule.

PART 3

DESIGN-BUILDER'S REPRESENTATIVE, KEY INDIVIDUALS AND OWNERSHIP

3.1 Design-Builder's Representative

- (a) The Design-Builder shall appoint a competent and qualified person to act as the Design-Builder's Representative and its agent in connection with the Project. Such appointment shall be subject to acceptance by the Province's Representative pursuant to the Consent Procedure, such acceptance not to be unreasonably withheld.
- (b) The Design-Builder's Representative shall:
 - (i) have extensive experience managing the development, design and construction phases of large, complex, design-build- projects comparable to the Project;
 - (ii) serve as the single point of contact for the Design-Builder to the Province, BCTFA and the Province's Representative for all purposes under this Agreement and all other Province Project Documents;
 - (iii) be an employee of, or an independent contractor directly engaged by, the Design-Builder;
 - (iv) reside in the vicinity of the Project Site and be located at the Project Site; and
 - (v) devote all working time, energy and skill to the Project and to carrying out the duties of the Design-Builder's Representative.
- (c) The Design-Builder's Representative shall be directly responsible for and fully engaged in, and shall not, except in accordance with Section 3.2 [Change of Design-Builder's Representative] of this Schedule, abdicate or delegate to any other employee or representative of the Design-Builder the performance of the Design-Builder's obligations under this Agreement and the other Province Project Documents and all aspects of the Project Work, including:
 - (i) the stewardship of the Design-Builder and of the Project Work; and
 - (ii) the contract management of all Subcontractors contracting directly with the Design-Builder, and the oversight of the contract management of all other Subcontractors, including addressing and communicating to the Province's

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Representative any issues raised by the Subcontractors in respect of the Project Work.

- (d) The Design-Builder's Representative shall have full authority to act on behalf of the Design-Builder for all purposes of the Project, and the Province, BCTFA and the Province's Representative:
 - (i) are entitled to treat any act of the Design-Builder's Representative in connection with this Agreement or any other Province Project Document as being expressly authorized by the Design-Builder, and shall not be required to determine whether any express authority has in fact been given; and
 - (ii) may refuse to recognize any act in connection with this Agreement or any other Province Project Document of any employee or representative of the Design-Builder other than the Design-Builder's Representative.
- (e) The Design-Builder's Representative shall work together with the Province's Representative in the spirit of partnering and cooperation.

3.2 Change of Design-Builder's Representative

- (a) The Design-Builder shall appoint, with the prior acceptance of the Province's Representative pursuant to the Consent Procedure, such acceptance not to be unreasonably withheld, a substitute the Design-Builder's Representative to serve in the place and stead of the Design-Builder's Representative during any temporary absence of the Design-Builder's Representative to ensure that at all times during the Term there is an accepted Design-Builder's Representative available and, until the Total Completion Date, located at the Project Site.
- (b) The appointment of the Design-Builder's Representative shall not be terminated by the Design-Builder for any reason without prior notice to and the prior acceptance, not to be unreasonably withheld, of the Province's Representative pursuant to the Consent Procedure to both such termination and to the appointment of a substitute the Design-Builder's Representative, provided that, in the case of death or serious illness of the Design-Builder's Representative, such notice to and acceptance by the Province's Representative shall take place as soon as practicable upon the Design-Builder's Representative ceasing to act.

3.3 Key Individuals

- (a) The Design-Builder represents to the Province that the following are the Key Individuals for the Project as at the Effective Date:
 - (i) Design-Builder's Representative: [];
 - (ii) Design Manager: [];
 - (iii) Construction Manager: []; and
 - (iv) Environmental Manager: [];

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Within 60 days after the Effective Date, the Design-Builder shall submit to the Province's Representative, for acceptance in accordance with the Consent Procedure, the Design-Builder's proposed Quality Director, Communications Manager, Traffic Manager and Indigenous Contracting and Employment Coordinator.

- (b) For each of the Quality Director, Communications Manager and Environmental Manager, such Key Individual shall:
- (i) be either an employee of, or an independent contractor directly engaged by, the Design-Builder;
 - (ii) report directly to the Design-Builder's Representative;
 - (iii) be specifically designated for the purpose of such role; and
 - (iv) be instructed and enabled by the Design-Builder to act in a fair and impartial manner in carrying out such role,
- and the Design-Builder shall not, without the prior acceptance of the Province's Representative pursuant to the Consent Procedure, such acceptance not to be unreasonably withheld:
- (v) change any such Key Individual's job specification or responsibilities;
 - (vi) permit any such Key Individual to be employed or engaged, as the case may be, by any person in connection with the Project other than the Design-Builder; or
 - (vii) permit any such Key Individual to be located at any location other than the Project Site.
- (c) The Design-Builder's Representative will be required at all times throughout the Term. All other Key Individuals shall be required at all times until the Total Completion Date. The Design-Builder shall use all reasonable efforts to ensure that the Key Individuals remain available to perform their respective duties during the applicable periods of time required pursuant to this Section 3.3(c).
- (d) If for any reason a Key Individual (other than the Design-Builder's Representative, in which case the provisions of Section 3.2 of this Part 3 shall apply) of this Schedule resigns, becomes unavailable or otherwise needs to be replaced (other than for vacation or other reasonable temporary absence provided there is reasonable coverage of the Key Individual's duties during such vacation or other reasonable temporary absence) to perform the Key Individual's duties then the Design-Builder will use all reasonable efforts to appoint a replacement with equivalent qualifications and experience to the unavailable Key Individual and the Design-Builder shall not replace such Key Individual without the prior acceptance of the Province's Representative, pursuant to the Consent Procedure, such acceptance not be unreasonably withheld.
- (e) The Design-Builder acknowledges that the success of the Project to both the Design-Builder and the Province is dependent on the retention at all times of the Key Individuals, and that if any of the Key Individuals are not available and are not replaced as required

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by this Agreement, the Province will not be obtaining the quality and level of Project Work assumed to be included in the payments to be made to the Design-Builder hereunder, may suffer losses and damages associated with the Project Work that are difficult to quantify in advance and that are reflected in the payments set out in Section 3.3(f)(i) below, that the Province may incur internal administrative and personnel costs and out-of-pocket costs reflected in Section 3.3(f)(ii) below and the Province may alternatively deem a Change as reflected in Section 3.3(f)(iii) below.

- (f) Except in circumstances where the Design-Builder has provided a temporary substitute acceptable to the Province acting reasonably in accordance with this Part 3, if the position of any Key Individual is unfilled for more than 5 weeks during a period when such Key Individual is required pursuant to Section 3.3(c) of this Schedule the following shall apply:
- (i) Prior to the Total Completion Date, any such failure to fill the relevant Key Individual position shall be a Non-Compliance Event and for each such Key Individual position the Design-Builder shall pay to the Province in respect thereof an amount equal to \$7,000 per week, or part thereof commencing on the day after the last day of the 5th week that the position remains unfilled.
 - (ii) In addition to the remedy under Section 3.3(f)(i) of this Schedule as applicable, the Design-Builder will pay the Province's reasonable internal administrative and personnel costs and all reasonable out-of-pocket costs related to any measures the Province considers are reasonably incurred in relation to the position being unfilled, including the costs to ensure that the Design-Builder meets the Project Requirements and for the Province's Representative to review and consider any replacement under this Section 3.3, provided that the maximum liability of the Design-Builder under this Section 3.3(f)(ii) will be \$7,000 per week or part thereof commencing on the day the Key Individual position is first unfilled.
 - (iii) The Province, at its election, may at any time deem the unfilled position of a Key Individual to be a Change that does not affect any requirements to otherwise comply with this Section 3.3 and upon such election the further liability of the Design-Builder under Sections 3.3(f)(i) and (ii) will cease and the Province will be credited with the amount of the cost (including wages, benefits, fees and other costs) that would have been incurred by the Design-Builder, in respect of the Key Individual plus a Mark-up as set out in Section 2.4(d) of Schedule 11 [Changes].
- (g) If at any time pursuant to the Project Requirements or otherwise as determined by the Province at its discretion, a Key Individual is required to attend a meeting related to the Project and the Key Individual is not available to attend or does not attend, the Province may postpone the meeting and any resulting delay is at the sole risk of the Design-Builder.
- (h) No one person may act as more than one Key Individual at any one time.

3.4 Design-Builder Ownership Information

- (a) The Design-Builder is Pacific Gateway Constructors General Partnership, a British Columbia general partnership, of which the three partners are CMI-HWY 91 Limited

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Partnership, Aecon Infrastructure Management Inc. and BelPacific Excavating & Shoring Limited Partnership, and which is formed by a Partnership Agreement

- (b) CMI-HWY 91 Limited Partnership is a British Columbia limited partnership formed on December 6, 2019 by a Limited Partnership Agreement

General partner CMI-HWY 91 Design Build Ltd. is a British Columbia corporation incorporated on December 5, 2019,

- (c) Aecon Infrastructure Management Inc. is an Alberta corporation incorporated on June 3, 2014 and extra-provincially registered in British Columbia on January 27, 2017,

- (d) BelPacific Excavating & Shoring Limited Partnership is a British Columbia limited partnership formed on October 31, 1996 by a Limited Partnership Agreement. Its general partner is Pacific Blasting & Demolition Ltd.

General partner Pacific Blasting & Demolition Ltd. is a British Columbia corporation incorporated on October 31, 1988,

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PROJECT SCHEDULE**

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**PART 1
GENERAL PROVISIONS**

1.1 Diligent Performance of Project Work

The Design-Builder shall:

- (a) commence the Project Work promptly following the Effective Date;
- (b) pursue the Project Work diligently to ensure that each of the milestone events for the completion of the Project Work, in each case as identified in the Project Schedule, as amended from time to time in accordance with Section 1.2 [Project Schedule] of this Schedule, is achieved at or before the time specified therefor in the Project Schedule, as so amended by the Design-Builder; and
- (c) perform the Project Work in material conformity with the Works Schedule, as amended from time to time in accordance with Section 1.3 [Works Schedule] of this Schedule, and with the Construction Management Plan, as amended from time to time in accordance with Section 1.6 [Construction Management Plan] of this Schedule.

1.2 Project Schedule

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

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1.3 Works Schedule

- (a) The Design-Builder shall prepare and submit to the Province's Representative for review in accordance with the Review Procedure:
 - (i) within 60 days of the Effective Date, an initial Works Schedule which shall be in all respects consistent with the Project Schedule;
 - (ii) at the same time as a revised Project Schedule is submitted in accordance with Section 1.2(b), 1.2(c) or 1.2(d) of this Schedule, a revised Works Schedule in respect of each such revised Project Schedule which shall be in all respects consistent with such revised Project Schedule; and
 - (iii) on the first Business Day of each month, a revised Works Schedule reflecting the actual progress of the Project Work to the date of submission and the expected progress of the Project Work thereafter, including up to and including the achievement of Substantial Completion and Total Completion.
- (b) Other than in the circumstances referred to in Section 1.3(a) of this Schedule, if the Design-Builder wishes to make any amendment to the Works Schedule or if in the opinion of the Province or the Design-Builder at any time the actual progress of the Project Work does not conform with the Works Schedule in any material respect then, prior to making any such amendment or within 15 days of being so advised by the Province or (if earlier) becoming aware of such nonconformity, the Design-Builder shall:
 - (i) provide the Province's Representative with a report identifying the reasons for such amendment to or nonconformity with the Works Schedule; and
 - (ii) submit to the Province's Representative for review in accordance with the Review Procedure a revised Works Schedule.
- (c) The initial Works Schedule and any revised Works Schedule submitted in accordance with this Section 1.3 shall:
 - (i) be in accordance with Good Industry Practice;
 - (ii) clearly indicate the critical path to the milestones set out in the Project Schedule;
 - (iii) satisfy the Design and Construction Requirements;
 - (iv) be in sufficient detail so as to enable the Province to resource itself appropriately;
 - (v) be in all respects consistent with the Project Schedule;
 - (vi) provide for the Project Work to be commenced and pursued diligently in accordance with Section 1.1 [Diligent Performance of Project Work] of this Schedule; and
 - (vii) include all additional information reasonably requested by the Province so as to enable the Province to monitor the progress of the Project Work.

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1.4 Conflict between Project Schedule and Works Schedule

The Works Schedule shall be provided for the information of the Province and the Province's Representative. In the event of any conflict between the Project Schedule and the Works Schedule, the Project Schedule shall, unless otherwise agreed by the Province in its discretion, prevail.

1.5 Construction Management Plan

- (a) The Design-Builder shall prepare and submit to the Province's Representative for review in accordance with the Review Procedure, within 60 days after the Effective Date, a plan (the "**Construction Management Plan**") which shall describe how the key components of the Construction will be carried out and the connection to the Works Schedule including, at a minimum, the following:
 - (i) identify and describe construction methodologies and work procedures for each the following:
 - (A) Highway 91:
 - (1) highway widening and modifications along Highway 91 from the Alex Fraser Bridge to south of the Nordel Interchange (Hwy 91/Nordel Way), including installation of signs, ITS equipment, noise mitigation, retaining structures, drainage appliances and ramps, and
 - (2) reconstruction of the Nordel Interchange, including bridge structures, Delta Nature Reserve boardwalk relocation and work on Nordel Way (east);
 - (B) Highway 91C:
 - (1) highway widening and modification along Highway 91C from the Nordel Interchange to the Sunbury Interchange (Hwy 91C/17), , including installation of signs, ITS equipment, noise mitigation, retaining structures, drainage appliances and ramps; and
 - (2) construction of the Hwy 91C/Nordel Way Interchange, including bridge structures and local access roads;
 - (C) Highway 17:
 - (1) highway widening and modification along Highway 17 from west of the Sunbury Interchange to east of the River Road Interchange, including installation of signs, ITS equipment, noise mitigation, retaining structures, drainage appliances and ramps;
 - (2) construction of the Sunbury Interchange (Hwy 17/91C), including bridge structures and local access roads; and

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- (3) construction of the River Road Interchange (on Hwy 17), including bridge structures and local access roads; and
 - (ii) for each of the components set out in paragraph (i) above, include details to describe each of the following:
 - (A) key issues and constraints affecting Construction and strategies to manage such issues and constraints;
 - (B) construction sequencing and staging including details to describe implementation of temporary roadway alignments and detours, lane and/or closures, temporary works, temporary bridges and barge facilities, laydown areas, material supply routes, fabrication facilities and sources, and batching plants;
 - (C) excavation management identifying controls being adopted to avoid or minimize impacts to known archaeology sites, as well as other sites that may be encountered during construction;
 - (D) construction approach to managing the interface between works over and adjacent to existing rail infrastructure;
 - (E) proposed construction and erection strategy for all Structures including associated roadway and marine traffic management requirements;
 - (F) list of all relevant permits required;
 - (G) utility relocation, protection, installation and co-ordination;
 - (H) description of the construction controls to be used to comply with the requirements of Schedule 6 [Environmental Obligations], including noise and vibration mitigation during Construction (including pile installation), hours of work and limits on vibrations caused by Construction operations; and
 - (I) monitoring programs for adjacent existing facilities such as buildings, utilities and other facilities.
- (b) If the Design-Builder wishes to make any amendment to the Construction Management Plan, the Design-Builder shall:
 - (i) provide the Province's Representative with a report identifying the reasons for such amendment to the Construction Management Plan; and
 - (ii) submit to the Province's Representative for review in accordance with the Review Procedure a revised Construction Management Plan.

**APPENDIX A
PROJECT SCHEDULE**

Project Schedule Milestone	Date
Effective Date	<i>December 13, 2019</i>
Completion of highway design Highway 91 / Nordel Way Interchange Highway 91C / Weigh Scale Interchange Highway 91C / Highway 17 Interchange Highway 17 / River Road Interchange	May 4, 2021 March 19, 2021 April 5, 2021 February 12, 2021
Highway 99 granular material Removal start Removal complete	October 15, 2020 October 13, 2021
Construction start Highway 91 / Nordel Way Interchange Delta Nature Reserve Boardwalk Highway 91C / Weigh Scale Interchange Highway 91C / Highway 17 Interchange Highway 17 / River Road Interchange	April 6, 2020 July 2, 2020 April 6, 2020 April 6, 2020 April 6, 2020
Construction complete Highway 91 / Nordel Way Interchange Delta Nature Reserve Boardwalk Highway 91C / Weigh Scale Interchange Highway 91C / Highway 17 Interchange Highway 17 / River Road Interchange	September 15, 2022 October 6, 2020 March 15, 2023 March 15, 2023 October 4, 2021
Substantial Completion Date	<i>November 30, 2022</i>
Total Completion Date	<i>May 31, 2023</i>

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**PART 1
GENERAL PROVISIONS**

ARTICLE 1 REFERENCE DOCUMENTS

1.1 Application of DBSS

The Project Work shall be carried out in accordance with the DBSS, subject to Section 1.3 [Order of Precedence] of this Part and with the following amendments to the DBSS:

- (a) Section 125 [Value Engineering – Proposal Guidelines] shall not apply;
- (b) any and all reference to “approval by the Ministry Representative” in the DBSS, in terms of acceptance of materials, work methodology or end product, shall be construed as meaning “approval by the Designer”;
- (c) any and all reference in the DBSS to the submission of material to the Ministry Representative “for approval”, “for acceptance”, or other qualifying phrase with similar connotation, is to be construed as the Province’s Representative retaining the right to object to the submission material as set out in the Review Procedure; and
- (d) when required under the DBSS to submit for approval by the Ministry Representative samples of any products which are not included on the Recognized Products List, to the extent the Design-Builder proposes to use any such products, the Design-Builder shall submit such samples to the Province’s Representative in accordance with the Review Procedure.

1.2 Reference Documents

Without limiting any other provision in the Agreement, the Reference Documents shall apply to the Project Work as described in this Schedule.

1.3 Order of Precedence

Unless otherwise expressly provided in this Schedule, if there is any conflict between any of the provisions of this Agreement and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the provisions of this Agreement;
- (b) the DBSS; and
- (c) any other applicable Reference Documents.

1.4 Province’s Design

The Province makes no representation or warranty whatsoever, express or implied, that the design or concepts for the Project Work developed by the Province comply with the Project Requirements and any use by the Design-Builder of any or all aspects of the Province’s design or concepts in performing the Project Work shall be entirely at the Design-Builder’s own risk.

ARTICLE 2 DESIGN AND CONSTRUCTION

2.1 Responsibility for Design and Construction

The Design-Builder shall be responsible for the Design and the Construction, including completion, commissioning and testing, all of which shall be carried out in strict accordance with the Design and Construction Requirements and in such a manner as to comply with this Agreement and all other applicable Project Requirements.

2.2 [Not Used]

2.3 Design Manager

The Design Manager shall be a Key Individual subject to the requirements of Section 3.3(c) of Schedule 2 [Representatives, Review Procedure and Consent Procedure] and shall have extensive experience leading multi-disciplinary design teams on large transportation projects of comparable scope, scale and complexity to the Project.

2.4 Province Project Office

The Design-Builder shall make available to the Province, from 60 days after the Effective Date until 20 days after the Total Completion Date, at the Design-Builder's sole cost and expense, a minimum of 3,000 square feet of office space:

- (a) approximately 50% of which office space shall be in proximity to the Design-Builder's project office, together with six secured parking stalls; and
- (b) approximately 50% of which office space shall be in proximity to the Design-Builder's field construction office, together with six secured parking stalls,

provided that, should the Design-Builder incorporate the project and field offices into one location, both requirements for paragraphs (a) and (b) above can be combined into one office for the Province, and all of which shall be within reasonable walking distance to public transit and within 2 km of the Project Site. Such office space shall include sufficient office furnishings and equipment, other than computer and telephone network systems, to permit the use thereof by the Province.

The Province has secured a 10,000 square metre (107,639.1 square foot) lease with the City of Delta located at 8100 Nordel Way, Delta. The Design-Builder may utilize this site for project offices, including the office(s) to be made available to the Province as identified above, or other purposes (including lay down areas and field equipment) by assuming responsibility for all conditions and obligations, including lease payments, pursuant to the lease agreement between the City of Delta and the Province.

ARTICLE 3 MUNICIPAL REQUIREMENTS

3.1 Scope

The Design-Builder shall perform the Design and Construction of the Project in accordance with the requirements in this Article 3 [Municipal Requirements], and this Agreement. Except where specifically provided otherwise in this Agreement, the bylaws, codes, processes and polices of the Municipality do not apply to the Design and Construction of the Project Work.

3.2 Hours of Work

The Design-Builder shall establish the hours of work when the Project Work will be performed in order to complete the Project Work in accordance with the Project Schedule. The Design-Builder shall notify the Province of the hours of work established for the Project and any changes the Design-Builder makes to those hours of work. The Design-Builder shall consider any recommendations or comments which the Province may have in relation to the Project's hours of work.

3.3 Utilities Owned by the Municipality

- (a) For greater certainty, the Municipality is to be construed as a Utility Supplier for the purposes of this Agreement.
- (b) Without limiting or derogating from any other requirement of this Agreement, the Design-Builder shall ensure that all Utility Work in relation to Utilities that are owned by the Municipality complies with applicable standards of the Municipality.
- (c) At the same time as the submission of any Design in relation to Utility Work by the Design-Builder to a Municipality, such Design shall also be submitted to the Province's Representative in accordance with the Review Procedure.
- (d) In advance of any permanent interconnections of Utilities owned by the Municipality to Project Infrastructure, the Design-Builder shall provide the Province with documents confirming code compliance to the relevant design and construction codes and standards in relation the Project Work.

3.4 Infrastructure Owned by the Municipality

- (a) All Infrastructure and Utilities owned by the Municipality other than the Infrastructure and Utilities referred to in this Schedule that requires relocation or replacement by the Design-Builder, shall be replaced with systems, fixtures and facilities which are of equal quality and capacity on a like-for-like basis.
- (b) Where the Design-Builder has decommissioned, abandoned or closed any Infrastructure or Utilities owned by the Municipality on the Project Lands referred to in clause (a) above, the Design-Builder shall offer the Municipality the opportunity to accept such removable Infrastructure and Utilities, and the Design-Builder shall deliver such Infrastructure and Utilities to the Municipality's public work yard unless otherwise agreed with the Municipality.

3.5 Permits and Fees

- (a) The Design-Builder is not required to obtain any development, building, trade, occupancy or other Permits, preliminary or other plan approvals, or other types of construction or similar permits or approvals from the Municipality in connection with the Project, including in respect of the Design, Construction, Operation and Maintenance, inspection, repair, alteration, renovation, modification, Utility services or interconnections, rehabilitation, reconstruction or removal of all or any component of the Project Work.

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- (b) Notwithstanding Section 3.5(a) of this Part, the Design-Builder shall make available to the Municipality information and drawings developed for the Project by the Design-Builder which can be made publicly available.
- (c) The Design-Builder is not required to pay any Permit fees, development charges or other municipal fees or charges to the Municipality in connection with the Project Work except for costs associated with:
 - (i) Utility Work;
 - (ii) use of fire hydrants and water fill stations;
 - (iii) field work performed by the Municipality at the Design-Builder's request;
 - (iv) perceived emergencies or other urgent situations in which such perceived emergency or urgent situation is caused or contributed to by the Project;
 - (v) testing and inspection of traffic signals owned by the Municipality; and
 - (vi) work related to disconnections and interconnections between the Project Work and Utilities owned by the Municipality.

3.6 Cooperation, Schedule and Work Priority

- (a) As soon as practical after the Effective Date, the Design-Builder shall develop and submit to the Province's Representative for review in accordance with the Review Procedure a schedule of those elements of the Project Schedule which pertain to the Municipality.
- (b) As required by the Province, the Design-Builder's Representative, or other designated representative of the Design-Builder, shall attend any meeting between the Province and the Municipality, or their respective representatives, on matters which relate to the development and construction of the Project Work and other matters of concern in relation thereto, with the expectation that such meetings shall be scheduled to occur at least monthly and will occur more frequently when appropriate.
- (c) The Design-Builder acknowledges that the Municipality will continue to perform its development application approval function and obligation for lands in and around the Project Lands during the Design and Construction and, as such, where municipal utility work or roadworks resulting from any municipal development approval is required on the Project Lands, the Design-Builder shall:
 - (i) co-operate reasonably with the Municipality and the land owner of the development, as applicable, to accommodate such municipal utility work or roadworks; and
 - (ii) be responsible for coordinating such municipal utility work or roadworks with the Municipality and land owner of the development, as applicable, where these works are either in conflict with the Design and Construction of the Project, or where these works fall within any part of the Project Site where construction activities are being carried out.

3.7 Surveys, Inspections, Plans, Drawings and Other Information

- (a) The Design-Builder shall conduct pre-construction and post-construction condition surveys of Infrastructure and Utilities owned by the Municipality, which are in the vicinity of Project Work and which the Design-Builder determines may be affected by the Project Work, to establish the location and condition thereof prior to commencement of any Project Work. The Design-Builder shall provide the Province copies of the pre-construction and post-construction condition surveys as they become available.
- (b) The Design-Builder shall provide all information, documentation and other assistance, including cooperation, reasonably requested by the Province to resolve any dispute between the relevant Municipality and the Province, as applicable relating to the Project Work.

3.8 Damage to Municipal Infrastructure

If it is determined, whether pursuant to a post-construction condition survey in accordance with Section 3.7(a) of this Part, or otherwise, that the Design-Builder has damaged any Infrastructure that is owned by the Municipality in the performance of the Project Work, then such damage shall constitute a Project Work Defect and the Design-Builder shall remedy such Project Work Defect in accordance with Section 2.3 [Correction of Project Work Defects] of Schedule 5 to the extent necessary to restore the damaged Infrastructure to its pre-construction condition.

ARTICLE 4 UTILITIES

4.1 Design-Builder Responsibility

The Design-Builder shall not construct, install or permit the construction or installation of any Utilities on, in, under or over the Project Site or any part thereof without the prior consent of the Province (which consent may be given or withheld in the discretion of the Province); provided that the Design-Builder shall not be in default under this Section as a result of the exercise by a Utility Supplier of its rights under a Utility Agreement or as a result of any Utility Work carried out in compliance with Section 4.5 [Utility Work] of this Part and any other relevant provisions of this Agreement. Without limiting the generality of the foregoing, at no time shall the Design-Builder use or permit the use of the Project Site or any Project Infrastructure for gas, oil or other petroleum product pipelines or infrastructure in connection therewith (other than those (if any) existing on the Effective Date) without the prior written consent of the Province (which consent may be given or withheld in the discretion of the Province).

4.2 Protection of Utilities

Except for Utility Work carried out in compliance with Section 4.5 [Utility Work] of this Part and any other relevant provisions of this Agreement, all Utilities located as at the Effective Date or thereafter on, in, under or over the Project Site (including Utilities within any excavation) are to remain in service and be protected and preserved by the Design-Builder during and after the performance of the Project Work and any other works carried out in the course of the Project.

4.3 Location

The Design-Builder shall be responsible for confirming the actual locations of all Utilities now or hereafter located on, in, under or over the Project Site and the Project Infrastructure and ensuring that its Subcontractors and employees of any of them are made aware of such locations as necessary to ensure

compliance at all times with the provisions of this Schedule. The Design-Builder shall not rely on location plans, as-built drawings supplied by Utility Suppliers or other similar documents for confirming locations of Utilities.

4.4 Utility Policy Manual

The Design-Builder shall abide by, observe, comply with and perform and cause its Subcontractors and employees of any of them to abide by, observe, comply with and perform the terms of Sections 8, 9, 10, 11, 12 and 14 of the Utility Policy Manual.

4.5 Utility Work

- (a) The Design-Builder shall be responsible for securing all temporary and permanent Utilities required in connection with or as part of the Project Work, and for all Utility Work to be carried out in connection with or as part of the Project Work.
- (b) The Design-Builder shall be responsible for constituting and enabling utility liaison groups comprised of the Utilities that may be impacted by the Project Work, and which utility liaison groups will meet with the Design-Builder on a regular basis to review work programs and schedule to exchange information and to resolve potential impacts.
- (c) Subject to the rights of Utility Suppliers under the Utility Agreements, all Utility Work shall be carried out by or under the supervision of and at the risk and expense of the Design-Builder and without limiting the generality of the foregoing, the Design-Builder shall be responsible for:
 - (i) obtaining from the relevant Utility Supplier, any Relevant Authority or any other Interested Party all rights of entry or access to the relevant Utilities that are necessary or expedient in connection with the Utility Work;
 - (ii) identifying all requirements in respect of the Utility Work, including determining the most effective strategies for undertaking the Utility Work;
 - (iii) liaising, arranging, co-ordinating and entering into all necessary agreements with relevant Utility Suppliers, Relevant Authorities and other Interested Parties in connection with the Utility Work, including obtaining any necessary consents or approvals in connection therewith, providing access for inspections and providing information and plans during and following completion of the Utility Work;
 - (iv) ensuring that all Permits in connection with the Utility Work are obtained, including preparing all required documentation in connection therewith and ensuring that such Permits are maintained and, to the extent necessary, updated following completion of any Construction Activities;
 - (v) observing and complying with any instructions or directions relating to the Utility Work that may be issued by the Province, including where issued by the Province expressly on behalf of a relevant Utility Supplier, Relevant Authority or other Interested Parties;

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- (vi) securing or causing to be secured the entry into or execution of all relevant construction and maintenance agreements, service contracts, and other agreements in connection with the Utility Work;
- (vii) when any Utility Work affecting Utilities referred to in a Utility Agreement are to be carried out, the Design-Builder shall, prior to commencing such Utility Work and in accordance with any notice requirements provided under the relevant Utility Agreements, give written notice to the relevant Utility Supplier confirming that the Utility Work is being carried out by or on behalf of the Design-Builder pursuant to this Agreement; and
- (viii) all electrical distribution or transmission and all telecommunication crossings whether underground or overhead.

4.6 Design-Builder Responsible for Utility Costs

The Design-Builder shall:

- (a) contract directly with the relevant suppliers for all electricity, gas, water, sewer, telephone and communications services and any other Utilities and services supplied to the Project Site and/or used or consumed in the conduct of the Project Work and pay for all costs and expenses of such Utilities and services;
- (b) notwithstanding any contrary provisions in existing Utility Agreements related to payment responsibilities, be responsible for all costs and expenses arising from or in connection with the Utility Work,

and if either the Province or BCTFA is invoiced or otherwise charged directly for any such costs or expenses, the Province or BCTFA (as the case may be) may pay such costs and expenses and the Design-Builder, upon demand, shall forthwith reimburse the Province or BCTFA, as applicable, for any amount so paid.

4.7 Province Assistance with Utility Matters

- (a) Without prejudice to Section 4.10 [New and Amended Utility Agreements] of this Part, and provided the Design-Builder has taken and continues to take all reasonable steps to obtain and to satisfy any conditions or requirements for obtaining from the relevant Utility Supplier, Relevant Authority, private owner or other person the rights of entry or access to any Utilities, or any other action, necessary or expedient to carry out any Utility Work required for the conduct of the Project Work within a reasonable time and on reasonable terms, then the Design-Builder may request the assistance of the Province (at the expense of the Design-Builder) in obtaining such rights of entry, access or other action, in which event the Province, to the extent it has the legal ability to do so under existing Laws, shall use reasonable efforts to provide such assistance.
- (b) In the event of a dispute between the Design-Builder and a Utility Supplier as to whether the Design-Builder is entitled to the benefit of or to exercise rights under any Utility Agreement which dispute, despite the reasonable and diligent efforts of the Design-Builder, has not been resolved within a reasonable period of time, the Province, at the request and expense of the Design-Builder, shall use reasonable efforts subject to the scope of the Province's legal rights

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under the terms of the relevant Utility Agreement to assist the Design-Builder in taking the benefit of or exercising the relevant rights under the Utility Agreement.

- (c) For further clarity, the assistance which the Design-Builder may request that the Province consider providing in accordance with and subject to the limitations of this Section may include the facilitation by the Province of processes associated with and contemplated therein for the resolution of disputes or the acquisition or exercise of rights associated with Utility Work or Utility Agreements, and may also include, where permitted in accordance with the terms of any Utility Agreement without the consent of the relevant Utility Supplier, the assignment of rights under such Utility Agreement to the Design-Builder.

4.8 Utility Agreements

In the exercise of its rights and performance of its obligations under this Agreement the Design-Builder agrees to comply with, observe and abide by and to cause its Subcontractors and employees of any of them to comply with, observe and abide by the terms of all Utility Agreements (whether existing on the Effective Date or entered into or amended thereafter in accordance with Section 4.10 [New and Amended Utility Agreements] of this Part). The Design-Builder shall not do or omit to do or permit to be done or omitted anything that would result in the Province or BCTFA being in default of any terms of the Utility Agreements.

4.9 Rights under Utility Agreements

Unless otherwise expressly set out in this Agreement, the Design-Builder shall be responsible for satisfying itself as to the extent to which it is entitled to take the benefit of or exercise rights under any Utility Agreement and, without limiting any other disclaimer or release of liability provided herein, the Province makes no representation or warranty whatsoever in that regard.

4.10 New and Amended Utility Agreements

The Province and BCTFA may enter into new Utility Agreements or amendments to existing Utility Agreements (which may include the grant of new Encumbrances or the amendment of existing Encumbrances affecting the Project Site or any part thereof) after the Financial Submittal Date to permit or facilitate the design, construction, installation, operation, repair, management, maintenance, rehabilitation, reconstruction and/or relocation of any existing or new Utilities. If the Province or BCTFA enters into any such new Utility Agreement or amendment that affects the Project Site or the conduct of the Project Work, the Province shall:

- (a) give notice to the Design-Builder and provide the Design-Builder with particulars of the effect of the new Utility Agreement or amendment as it relates to the Project Site and the conduct of the Project Work;
- (b) use or cause to be used reasonable efforts to include provisions in the new Utility Agreement or amendment requiring the Utility Supplier to use reasonable efforts in exercising its rights thereunder as they relate to the Project Site so as to avoid or, if unavoidable, minimize physical disruption to the operation of the Project Infrastructure or physical damage to the Project Infrastructure; and
- (c) unless such new Utility Agreement was entered into to facilitate the Project Work, as part of or for the purposes of the acquisition of Province Lands pursuant to Schedule 8 [Lands], issue

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in respect of such new Utility Agreement a Province Change and the provisions of Part 7 [Province Changes and the Design-Builder Proposals] shall apply accordingly.

4.11 Indemnity by Design-Builder

The Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in respect of any and all Direct Losses and Claims (except only to the extent such Direct Losses and Claims are caused directly by a Province Non-Excusable Event), which the Province and the Province Indemnified Persons, or any of them, may suffer or incur arising as a result of the provision of any assistance by the Province to the Design-Builder in accordance with either Section 4.7(a) or Section 4.7(b) of this Part, regardless of whether or not the Design-Builder ultimately obtains the relevant rights of entry, access or other action, or is able to take the benefit of or exercise any rights under the relevant Utility Agreement, as the case may be.

ARTICLE 5 OPERATION AND MAINTENANCE

5.1 Responsibility for Operation and Maintenance - General

The Design-Builder shall carry out the operation and maintenance of the Project Infrastructure (the “**Operation and Maintenance**”) in accordance with the requirements set out in this Article 5 in such a manner as to comply with this Agreement from the Effective Date to the Substantial Completion Date or, if earlier, the Termination Date.

5.2 Operation and Maintenance – Clarifications

- (a) The Design-Builder shall not be responsible for routine winter maintenance, as specified in the Highway 17 Winter Maintenance Specifications, on roadways open to the public (other than roadways within the jurisdiction of the City of Delta) on Highway 91, Highway 17, Highway 91C, Interchange Ramps and Other Specified Roads within the footprint of the Original Province Infrastructure.
- (b) The Design-Builder shall be responsible for the Operation and Maintenance of Project Infrastructure within the City of Delta.
- (c) The Design-Builder shall be responsible for the full operational control of traffic control devices, including the ongoing operation and maintenance of the full signal and controller in accordance with the Signal Control O&M Standards attached to the Municipal Agreement, commencing upon the Design Builder’s first entry into the traffic controller cabinet, and continuing a date to be agreed by the Design-Builder and the Municipality, such that responsibility for the signal cabinet control remains with the Design-Builder until such time as no further signal cabinet access is required by the Design-Builder for the Project.
- (d) The Design-Builder shall be responsible for routine winter maintenance, as specified in the Maintenance Specifications – Service Area 6, of newly constructed roads (temporary and permanent) situated beyond the footprint of the Original Project Infrastructure for the period commencing when such roads are open to the public and continuing until the Substantial Completion Date.
- (e) The Design-Builder shall be responsible for snow removal in the Construction work zone, behind temporary barriers or other devices, including removal of snow or ice placed within

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the Design-Builder's Construction work zones as a result of winter maintenance activities by the Province and the City of Delta.

- (f) For all New Project Infrastructure that has a surface condition that will cost more to maintain than the surface as it existed at the Effective Date, the Design-Builder shall be responsible for the routine winter maintenance services in accordance with the Maintenance Specifications – Service Area 6 or, with consent of the Province's Representative or the City of Delta, for any additional cost of maintenance, as determined by the Province's Representative or the City of Delta, as the case may be, resulting from the actual surface conditions.
- (g) The Design-Builder shall be responsible for the maintenance of temporary and permanent Pavement Markings in accordance with Article 8 [Signing and Pavement Marking Design Criteria] of Part 2, and Part 4 [Traffic Management] of this Schedule.

5.3 Operation and Maintenance - Specifications

The Design-Builder shall carry out Operation and Maintenance in accordance with the Maintenance Specifications – Service Area 6 with the following amendments:

- (a) Any and all references to "Contractor" are to be construed as the Design-Builder.
- (b) Section 1.2, Services, b) Quantified Maintenance Services is revised to the following:

"Consist of the planned maintenance, repair, replacement or new installation of all infrastructure identified as Quantified Maintenance Services in Schedule 1 Specifications and includes work activities that are reasonably predictable or seasonal, that are of a minor restorative nature."
- (c) In reference to Schedule 1, Specifications, the following shall not apply:
 - (i) Section 1.2 Services, c) Additional Maintenance Services;
 - (ii) Section 2 Routine Maintenance Services Cap; and
 - (iii) Section 3 Warranty.
- (d) Section 1.4, Specification Format, the 6th bullet, Routine Maintenance Service Cap and the 7th bullet, Warranty, shall not apply.
- (e) Section 1.5, Interpretation, is revised to the following:

"When the statements "as directed by the Province", "as approved by the Province", or "as determined by the Province" are used, this means the Province may provide the direction, approval or determination from the Province's Representative in accordance with the Consent Procedure"

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- (f) The Section 6, General Specifications, that shall apply (Included) and shall not apply (Excluded) are set out in Table 5.3a as follows:

Table 5.3a

Schedule 1 Specifications Section 6 General Specifications	Routine Maintenance Services	Quantified Maintenance Services
1 Surface Maintenance		
1.01 Asphalt Pavement Maintenance	Included	Included
1.02 Surface Treatment	Not Specified	Excluded
1.03 Highway and Shoulder Grading and Re-Shaping	Not Specified	Excluded
1.04 Dust Control and Base Stabilization	Not Specified	Excluded
1.05 Surface and Shoulder Gravelling	Not Specified	Excluded
1.06 Road Base Maintenance	Not Specified	Excluded
1.07 Surface Cleaning	Included	Included
1.08 Debris Removal	Included	Not Specified
1.09 Cattle Guard System Maintenance	Excluded	Excluded
1.10 Raised Hard Surfaced Infrastructure and Safety Device Maintenance	Included	Included
1.11 Railway Crossing Approach Maintenance	Included	Not Specified
2 Drainage Maintenance		
2.01 Ditch Maintenance	Included	Included
2.02 Drainage Appliance Maintenance	Included	Included
2.03 Shore, Bank and Watercourse Maintenance	Included	Included
3 Winter Maintenance		
3.01 Highway Snow Removal	Excluded	Excluded
3.02 Snow and Ice Bonding Prevention and Control	Excluded	Excluded
3.03 Other Snow Removal and Ice Control ⁽¹⁾	Excluded	Excluded
3.04 Snow Avalanche Response	Excluded	Excluded
4 Roadside Maintenance		
4.01 Vegetation Control	Not Specified	Included
4.02 Brush, Tree and Danger Tree Removal	Not Specified	Included
4.03 Litter Collection and Graffiti Removal Maintenance	Included	Not Specified
4.04 Rest Area Facility Maintenance (Truck Parking Site)	Included	Not Specified
4.05 Fence Maintenance	Excluded	Excluded
4.06 Roadside Catchment Appurtenances Maintenance	Not Specified	Included

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Schedule 1 Specifications Section 6 General Specifications	Routine Maintenance Services	Quantified Maintenance Services
5 Traffic Maintenance		
5.01 Sign System Maintenance	Included	Included
5.02 Temporary Pavement Markings and Eradication	Included	Included
5.03 Traffic Management	Excluded	Not Specified
6 Structures Maintenance		
6.01 Bridge Deck Maintenance	Included	Included
6.02 Structures Cleaning Maintenance	Included	Not Specified
6.03 Structures Drainage Maintenance	Included	Not Specified
6.04 Bridge Joint Maintenance	Included	Included
6.05 Bridge Bearing Maintenance	Included	Included
6.06 Bailey and Acrow Bridge Maintenance	Excluded	Not Specified
6.07 Structure Minor Coating	Not Specified	Excluded
6.08 Concrete Structure Maintenance	Included	Included
6.09 Steel, Aluminum and Multi-plate Structure Maintenance	Included	Not Specified
6.10 Bridge Piling Maintenance	Included	Included
6.11 Retaining Wall Maintenance	Not Specified	Included
6.12 Bridge Railing Maintenance	Included	Not Specified
6.13 Timber Truss Bridge Maintenance	Excluded	Excluded
6.14 Timber and Log Bridge Maintenance	Excluded	Excluded
7 Network Management		
7.01 Highway Incident Response	Included	Not Specified
7.02 Major Event Response	Included	Not Specified
7.03 Highway Inspection	Included	Not Specified
7.04 Highway Safety Patrol	Included	Not Specified
7.05 Communications	Included	Not Specified

Notes:

(1) Unless otherwise stated in Article 5.2 [Operation and Maintenance – Clarifications] of this Part.

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- (g) The Section 7, Highway Maintenance Specifications, that shall apply (Included) and shall not apply (Excluded) are set out in Table 5.3b as follows:

Table 5.3b

Schedule 1 Specifications Section 7 Local Area Specifications	Routine Maintenance Services	Quantified Maintenance Services
1 LOWER MAINLAND		
1.01 Definitions		
1.02 Tunnel Traffic Monitoring / Control – George Massey Tunnel	Excluded	Not Specified
1.03 Tunnel Traffic Monitoring / Control – George Massey Tunnel Bridge	Excluded	Not Specified
1.04 Bridge Hard Surfaced Apron / Revetment Cleaning	Excluded	Not Specified
1.05 Bridge Traveller Maintenance – Alex Fraser Bridge and Port Mann Bridge	Excluded	Not Specified
1.06 Bridge Cable Stayed Snow and Ice Control – Alex Fraser Bridge	Excluded	Not Specified
1.07 Bridge Cable Stayed Snow and Ice Control – Port Mann Bridge	Excluded	Not Specified
1.08 Highway Crossing Infrastructure	Excluded	Excluded
1.09 Invasive Plants Management	Included	Included
1.10 Lane Closures	Excluded	Not Specified
1.11 Movable Barrier Transfer System Operations and Maintenance – Alex Fraser Bridge	Excluded	Not Specified
1.12 Movable Bridge Operations and Maintenance – Middle Arm South and Annacis Channel Swing Bridges	Excluded	Not Specified
1.13 Pavement Surface Reflectors	Not Specified	Excluded
1.14 Salt Containment Infrastructure Maintenance	Excluded	Not Specified
1.15 Sound Wall Maintenance	Not Specified	Excluded
1.16 Traffic Patrol - Bridges and Tunnel	Excluded	Not Specified
1.17 Traffic Patrol – Port Mann Highway 1	Excluded	Not Specified
1.18 Traffic Management – Pacific Highway Truck Crossing	Excluded	Not Specified
1.19 Traffic Management and Support – Port Mann Highway 1 Structures Inspections	Excluded	Not Specified
1.20 Vehicle Inspection Station Maintenance	Excluded	Excluded

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- (h) The following Schedules shall not apply:
3. Additional Maintenance Services;
 4. Cost Plus Rates;
 5. Maintenance Services Fee;
 6. Annual Adjustment Process;
 7. Rates for Changes to Infrastructure;
 8. Infrastructure;
 9. Service Area;
 10. Automated Weather Stations;
 13. Gravel License;
 14. Repeater System;
 15. Dispute Resolution Protocol;
 16. Prime Contractor Designation;
 17. Bonds;
 18. Insurance Requirements;
 19. Insurance & Securities (Renewal Term);
 20. Privacy Protection; and
 21. Contractor Detail.
- (i) The Summer Classification shall be “1” and the Winter Classification shall be “A”.

5.4 Operation and Maintenance – Electrical Specifications

The Design-Builder shall carry out Operation and Maintenance of electrical infrastructure in accordance with Electrical Maintenance Specifications – Service Area 6 with the following amendments:

- (a) Any and all reference to “Contractor” is to be construed as the Design-Builder.
- (b) Any and all reference to “Ministry Representative” is to be construed as Province’s Representative.
- (c) Section 3, Materials, Clause 3.2 shall not apply.
- (d) The electrical specifications as listed in the “Electrical Maintenance Specifications Listing” that shall apply (Included) and shall not apply (Excluded) are set out in Table 5.4a as follows:

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Table 5.4a

Electrical Maintenance Specifications Listing	Maintenance Services
E-110 Traffic and Pedestrian Signal Maintenance	Included
E-120 Illuminated Pedestrian Crossing Signs and Special Crosswalk Signs Maintenance	Included
E-130 Flashing Beacon Maintenance	Included
E-140 Actuated Railway Warning Sign Maintenance	Included
E-160 One Way Bridge Signal Maintenance	Excluded
E-180 Fire Signal Maintenance	Excluded
E-190 Uninterruptible Power Supply (UPS) Maintenance	Included
E-210 Post Mounted Flasher Maintenance	Included
E-220 Warning Signs with Flashers Maintenance	Included
E-230 Aviation, Navigational and Pier Lighting Maintenance	Excluded
E-310 Street, Roadway, Area and Sign Lighting Maintenance	Included
E-320 Highmast Lighting Maintenance	Excluded
E-330 Tunnel and Snowshed Lighting Maintenance	Excluded
E-340 Pedestrian and Cyclist Tunnel Lighting Maintenance	Excluded
E-350 Architectural and Ornamental Lighting	Excluded
E-410 Short Duration Traffic Counter Station Maintenance	Excluded
E-420 Permanent Traffic Counter Station Maintenance	Included
E-510 Open / Closed Sign Maintenance	Excluded
E-520 Electronic Message Sign Maintenance	Included
E-530 Overheight Detection System Maintenance	Excluded
E-610 Web Camera Maintenance	Excluded
E-700 Highway Electrical Infrastructure Incident and Vandalism Response	Included
E-710 Traffic Controller Equipment Disposal	Included
E-800 Electrical Patrol	Included
E-900 Weigh Scales	Excluded

- (e) The following Schedules in the Electrical Maintenance Specifications – Service Area 6 shall not apply:
2. Local Area Specifications;
 3. Electrical Service Area (Map Reference);
 4. Inventory;
 5. Fee;

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6. Cost for Changes to Inventory;
7. Annual Adjustment Process;
8. Additional Services;
9. Prime Contractor Designation Highway Construction Projects;
10. Dispute Resolution Protocol;
12. Repeater System;
13. Provincial Material List;
14. Bonds;
15. Insurance;
16. Insurance Securities (Renewal Term);
17. Privacy Protection; and
18. Contractor Details.

5.5 Operation and Maintenance Manager

- (a) The Design-Builder shall designate an Operation and Maintenance Manager (the “**Operation and Maintenance Manager**”), who shall be responsible for:
 - (i) day-to-day Operation and Maintenance of Project Infrastructure;
 - (ii) incorporating local user and stakeholder input into the Operation and Maintenance of highways and municipal roadways; and
 - (iii) coordinating and planning Operation and Maintenance activities with adjacent operators.
- (b) The Operation and Maintenance Manager shall have the following experience:
 - (i) directly overseeing the operation and maintenance, during construction, of transportation infrastructure comparable to the Project Infrastructure;
 - (ii) managing the day-to-day operations of highway and municipal facilities; and
 - (iii) managing maintenance resources, including labour, equipment, material, facilities, suppliers and subcontractors.

5.6 Operation and Maintenance Plan

The Design-Builder shall develop, implement and update an operation and maintenance plan (the “**Operation and Maintenance Plan**”) that demonstrates compliance with the requirements of this Article and this Agreement. The Operation and Maintenance Plan shall be submitted to the Province’s Representative, no later than 60 days from the Effective Date, in accordance with the Review Procedure and shall include at a minimum:

- (a) detailed description of the roads including road name, length;

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- (b) mapping that displays the road locations and extents of the Project Site;
- (c) the Design-Builder's specific approach, processes, resources, work programming, facilities and activities for meeting its Operation and Maintenance responsibilities;
- (d) applicable specifications for the Operation and Maintenance activities performed;
- (e) organizational structures for achieving the Operation and Maintenance work;
- (f) format of Operation and Maintenance Records; and
- (g) relevance to and interface with other relevant documents and management plans.

**PART 2
DESIGN AND CONSTRUCTION REQUIREMENTS**

ARTICLE 1 LANING AND GEOMETRICS DESIGN CRITERIA

1.1 Order of Precedence

The Design for the laning and geometrics shall be in accordance with the criteria contained in this Article and the following codes and standards, and if there is any conflict between criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) the applicable Ministry Technical Circulars and Ministry Technical Bulletins included in the Reference Documents;
- (c) BC Supplement to TAC;
- (d) TAC Geometric Design Guide;
- (e) the DBSS; and
- (f) the applicable documented standards of the Municipality.

1.2 General Requirements

- (a) The Design-Builder's Design for the Project Infrastructure shall be based foremost on good engineering practices, with the traffic performance of the Design verified in accordance with the requirements of Section 1.5 [Traffic Engineering] of this Article.
- (b) The laning and geometrics design criteria for the Project Infrastructure are set out in this Article.

1.2.1 TAC Design Domain Parameters

The BC Supplement to TAC and TAC Geometric Design Guide give a range of design domain parameters that shall be used for various components of the Design of the New Project Infrastructure. The TAC design domain value ranges for the various design parameters were established based on assumed variable operating speeds of the New Project Infrastructure. For the purposes of the Design of the New Project Infrastructure, operating speeds for the various roadways shall be deemed to be no less than the design speed stated in the Design Criteria tables shown in Section 1.3 [Geometric Design Criteria] of this Article. Consequently, unless specified otherwise, the design of the New Project Infrastructure shall be based on the upper limit of the design domain values indicated in the BC Supplement to TAC and TAC Geometric Design Guide, whenever either guide is applicable and subject to the order of precedence under Section 1.1 [Order of Precedence] of this Article.

1.2.2 General Laning

- (a) As a minimum, the number, location and configuration of lanes for Highway 91, Highway 17, Highway 91C, Interchange Ramps, Other Specified Roads and River Road shall be in accordance with the requirements of Section 1.3 [Geometric Design Criteria] of this Part.

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- (b) Transitions and interfaces with municipal roadways shall be, at a minimum, consistent with ambient conditions.
- (c) Where existing roads are truncated, cul-de-sacs shall be provided.

1.2.3 Interchanges

- (a) The following interchange configurations shall not be permitted:
 - (i) rotaries or roundabouts;
 - (ii) diverging diamond interchanges; and
 - (iii) single-point diamond interchanges.
- (b) All movements shall be free flow and no traffic signals are permitted in interchanges except as otherwise provided in Section 1.4 [Specific Design Requirements by Project Section] of this Article.
- (c) All interchange layouts shall incorporate single-exit configurations, except as noted otherwise in this Article.
- (d) The use of left side exit and entrance ramps shall not be permitted.
- (e) All exit ramps shall be designed as direct taper exit ramps.
- (f) All entrance ramps shall be designed as parallel entrance ramps in accordance with the TAC Geometric Design Guide, except that parallel entrance ramps shall have a minimum lane length of 105 m.
- (g) Access to and egress from interchange ramps shall not be permitted.

1.2.4 Intersections

- (a) All intersections shall be Performance Based Connections unless noted otherwise in this Article.
- (b) Intersections shall be designed in accordance with Chapter 700 of the BC Supplement to TAC unless otherwise provided in this Article.
- (c) Intersection configurations which incorporate left and/or right turn movements of more than two lanes (per movement) shall not be permitted.
- (d) Signalized intersection designs shall be in accordance with Article 6 [Electrical, Signals and Lighting Design Criteria] of this Part.
- (e) Double lane channelized right turn movements at signalized intersections shall be signal controlled.
- (f) Roundabouts at intersections:

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- (i) Roundabouts with more than two lanes within the circulatory roadway are not permitted.
- (ii) All roundabouts shall be Performance Based Connections unless otherwise provided in Section 1.4 [Specific Design Requirements by Project Section] of this Article.
- (iii) Roundabouts shall be considered as an option for intersection designs in accordance with Technical Circulars T-06/08 and T-12/06.
- (iv) Roundabouts shall be designed in accordance with Section 740 of the BC Supplement to TAC.

1.2.5 Access to Properties

- (a) Existing accesses to and egresses from affected properties from and to the municipal road network shall be maintained.
- (b) Accesses to and from Highway 17 and Highway 91C shall not be permitted, except the existing westbound egress from Highway 91C to the Provincial Commercial Truck Inspection Facility.
- (c) Accesses to existing Utilities shall be provided in the Design.
- (d) All property accesses to municipal roads are not Performance Based Connections.

1.2.6 Weaving Sections

- (a) The capacity analysis of weaving sections shall be determined using procedures in the Highway Capacity Manual and as specified in this Article.
- (b) Weaving sections on the mainline of Highway 91, Highway 17 and Highway 91C shall be designed to maintain the principles of “lane balance” as per the TAC Geometric Design Guide, unless otherwise specified in this Article.

1.2.7 Horizontal Curves

- (a) The minimum horizontal curve radii shown in the design criteria for Provincial freeways, expressways, arterials and interchange ramps are based on a maximum superelevation of 6%.
- (b) The minimum horizontal curve radii shown in the design criteria for municipal arterial and collector roadways are based on a maximum superelevation rate of 6% for the City of Delta.

1.2.8 Vertical Curves

Low points in the design profiles shall not occur on Bridges and shall be located a minimum of 5 m beyond any abutments.

1.2.9 Stopping Sight Distance

The minimum stopping sight distances shall be those shown on the design criteria tables based on TAC Geometric Design Guide Table 2.5.2. The increased stopping sight distance values as shown in TAC Geometric Design Guide Table 2.5.3 shall be used where appropriate.

1.2.10 Decision Sight Distance

Decision sight distance based on TAC Geometric Design Guide Table 2.5.6 shall be used and shall be applied as noted in Section 1.3 [Geometric Design Criteria] of this Article.

1.2.11 Clear Zone Requirements

- (a) Clear Zone distances and side slope treatments on roads within Provincial jurisdiction shall be established in accordance with Section 620.06 of the BC Supplement to TAC.
- (b) Requirements for Zones of Intrusion in accordance with the TAC Geometric Design Guide shall be incorporated in the Design. The Design shall meet the requirements of Section H5.4.4 of the Alberta Infrastructure and Transportation Roadside Guide for Zones of Intrusion, including Table H5.5 for obstacle setbacks, except for vertical clearance under Bridges, where Article 3.3.3 [Clearances] of this Part shall apply.

1.2.12 Bus Stops/Bays

- (a) All existing bus stops and bus bays are to be retained or reconstructed and shall be designed and constructed in accordance with the TransLink Bus Infrastructure Design Guidelines.
- (b) A new westbound bus stop/bay shall be provided on the north side of River Road on the westbound departure leg from the Highway 17 westbound and River Road ramp terminal junction, and shall be designed and constructed in accordance with the TransLink Bus Infrastructure Design Guidelines and in accordance with Article 11.4.2 [River Road] of this Part.

1.2.13 Detours and Temporary Roadways

The design criteria for detours and other temporary roads shall be in accordance with the requirements of Part 4 [Traffic Management] of this Schedule.

1.2.14 Traffic Barriers

- (a) Traffic barriers shall be placed in accordance with the BC Supplement to TAC, the TAC Geometric Design Guide and the AASHTO Roadside Design Guide.
- (b) Bridge end parapets, traffic barriers with ends protected by terminals, flares, or impact attenuators, shall be in accordance with the AASHTO MASH, Test Level 3.
- (c) On Roads within Provincial jurisdiction roadside barrier shall be used where it is not practical to provide Clear Zone.

- (d) On City of Delta roads, roadside barrier warrants shall be in accordance with the “Barrier Index Warrant”, Section 610 of the BC Supplement to TAC.

1.2.15 Rail Interface

- (a) Rail crossings shall be designed and constructed in accordance with the Railway Agreements, the applicable rail Ministry requirements, the Bridge Standards and Procedures Manual, CTA Cost Apportionment Guidelines and the Transport Canada Railway Clearance Standard.
- (b) Works adjacent to the railway shall conform to the above to the extent necessary to permit adjacent works. These works shall be carried out in a manner that does not cause track movement beyond those permitted in accordance with Transport Canada requirements.
- (c) Conveyance of water to and from the railway infrastructure and right-of-way shall be designed to be consistent with Ministry and railway standards.
- (d) Wall and other supporting structures shall be designed, as required, to railway specifications when supporting the railway or railway infrastructure and right-of-way shall be designed in accordance with Ministry and railway standards.
- (e) Fencing/guardrail-barriers required on railway property or adjacent to railway property to protect the railway or road traffic shall be designed in accordance with Ministry and railway standards.

1.3 Geometric Design Criteria

1.3.1 General – Roadway Cross Slopes

- (a) The Design shall prevent standing water within the travelled lanes.
- (b) Where more than 3 lanes are sloped in the same direction, the Design shall consider the risk of hydroplaning at the 1 in 10 year storm design frequency.

1.3.2 Highway 17

Table 1.3.2 provides the highway geometric design criteria that are to be applied for the Design and Construction of Highway 17. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.2

Geometric Design Criteria	Highway 17
Design Classification	RAD
Posted Speed	80 km/h
Design Speed	80 km/h
Basic Lanes	4 (2 per direction)
Minimum Radius	250 m
Min. K Factor Sag	30(16) ⁽¹⁾
Min. K Factor Crest	36 ⁽²⁾
Max. Grade	4.0%
Min. Grade	0.5% ⁽³⁾

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Geometric Design Criteria	Highway 17
Max. Superelevation	6%
Minimum S.S.D.	140 m
Minimum D.S.D.	230 m ⁽⁴⁾
Lane Width	3.60 m ⁽⁵⁾
Shoulder Width Outside	2.50 m ⁽⁶⁾
Shoulder Width Inside	0.50 – 1.80 m ⁽⁷⁾
Median Width	1.6 – 2.90 m ⁽⁸⁾
Design Vehicle	WB20

Notes:

- (1) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (2) The minimum k value for crest curves is based on taillight control.
- (3) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (4) Decision Sight Distance is for speed/path/direction change on rural roadway.
- (5) Interchange and intersection deceleration and acceleration lanes (parallel lane adjacent to thru lanes) shall be 3.6 m wide.
- (6) The outside shoulder width on the BNSF Flyover Bridge structure may be reduced by up to 1.0 m from the normal shoulder width to 1.5 m to fit the highway, ramps and auxiliary lanes within the existing width between the bridge parapets; however, the width between the existing bridge parapets shall not be reduced. The outside shoulder width on auxiliary lanes may be reduced by up to 1.0 m from the normal shoulder width to 1.5 m for the section adjacent to 9924 River Road.
- (7) Inside shoulder width varies depending on the horizontal and vertical alignment. The inside shoulder width shall not be less than 0.5 m between the Concrete Median Barrier (CMB) face and the lane line provided the minimum SSD can be achieved. Where SSD is restricted by horizontal curvature and the CMB, the inside shoulder width shall be increased to improve the minimum SSD up to a maximum inside shoulder width of 1.8 metres using an asymmetrical median treatment as described in Section 630.02(6) of the BC Supplement to TAC.
- (8) Median width varies depending on the horizontal and vertical alignment. In tangent and sections with flat horizontal curves, the median width shall be a minimum of 1.6 metres. In areas of tight horizontal curves, the inside shoulder widths on the outside of a horizontal curve shall be increased to improve the minimum SSD, to a maximum overall median width of 2.90 metres.

1.3.3 Highway 91

Table 1.3.3 provides the highway geometric design criteria that are to be applied for the Design and Construction of Highway 91. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.3

Geometric Design Criteria	Highway 91
Design Classification	RFD
Posted Speed	70/90 km/h ⁽¹⁾
Design Speed	70/90 km/h ⁽¹⁾
Basic Lanes	5 (2 NB/3 SB)
Minimum Radius	190/340 m
Min. K Factor Sag	12/20 ⁽²⁾

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Geometric Design Criteria	Highway 91
Min. K Factor Crest	22/53 ⁽³⁾
Max. Grade	4.0%
Min. Grade	0.5% ⁽⁴⁾
Max. Superelevation	6%
Minimum S.S.D.	110/190 m
Minimum D.S.D.	200/275 m ⁽⁵⁾
Lane Width	3.70 m
Shoulder Width Outside	3.00 m
Shoulder Width Inside	Varies
Median Width	Varies
Clear Zone Offset Width/Recovery Slope	9.0 m or CRB / 4H:1V
Design Vehicle	WB20

Notes:

- (1) The posted speed and design speed on Highway 91 changes from 90 km/h to 70 km/h at the Nordel Way/Highway 91 EB Couplet Underpass. The design speed and posted speed is 90 km/h south of the underpass and 70 km/h north of the underpass.
- (2) The value shown is the minimum k based on comfort control for fully illuminated roadway.
- (3) The minimum k value for crest curves is based on taillight control.
- (4) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (5) Decision Sight Distance is for speed/path/direction change on rural roadway.

1.3.4 Highway 91C

Table 1.3.4 provides the highway geometric design criteria that are to be applied for the Design and Construction of Highway 91C. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.4

Geometric Design Criteria	Highway 91C
Design Classification	UAD ⁽¹⁾
Posted Speed	60 km/h
Design Speed	60 km/h
Basic Lanes	6 (3 per direction) ⁽²⁾
Minimum Radius	130 m
Min. K Factor Sag	18(9) ⁽³⁾
Min. K Factor Crest	13 ⁽⁴⁾
Max. Grade	6.0%
Min. Grade	0.5% ⁽⁵⁾
Max. Superelevation	6%

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Geometric Design Criteria	Highway 91C
Minimum S.S.D.	85 m
Minimum D.S.D.	205 m ⁽⁶⁾
Lane Width	3.60 m ⁽⁷⁾
Shoulder Width Outside	2.00 m
Shoulder Width Inside	1.00 – 1.80 m ⁽⁸⁾
Median Width	2.6 – 3.4 m ⁽⁹⁾
Design Vehicle	WB20

Notes:

- (1) A curb and gutter urban template shall be provided between the Highway 91C/17 Interchange and the Nordel Way/Highway 91 Interchange. A 2.0m gravel shoulder shall be provided behind the curb and gutter on both sides.
- (2) A minimum of 6 basic lanes shall be provided, and the number of lanes shall be increased to satisfy the requirements of Section 1.5 [Traffic Engineering] and Section 1.4 [Specific Design Requirements] by Project Section.
- (3) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (4) The minimum k value for crest curves is based on taillight control.
- (5) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (6) Decision Sight Distance is for speed/path/direction change on suburban roadway.
- (7) Interchange and intersection deceleration and acceleration lanes shall be 3.6 m wide with 2.0 m outside paved shoulders.
- (8) Inside shoulder width varies depending on the horizontal and vertical alignment. The inside shoulder width shall not be less than 1.0 m between the Concrete Median Barrier (CMB) face and the lane line provided the minimum SSD can be achieved. Where SSD is restricted by horizontal curvature and the CMB, the inside shoulder width shall be increased to improve the minimum SSD up to a maximum inside shoulder width of 1.80 metres using an asymmetrical median treatment as described in Section 630.02(6) of the BC Supplement to TAC. The 1.80 metres inside shoulder width will provide 3.3 m between the CMB and an object on the road as shown in Figure 630.A Modified Median, in the BC Supplement to TAC.
- (9) Median width varies depending on the horizontal and vertical alignment. In tangent and sections with flat horizontal curves, the median width shall be a minimum of 2.6 metres. In areas of tight horizontal curves, the inside shoulder widths shall be increased to provide the BC Supplement to TAC 630 Median Treatment, and the corresponding median width will be increased to 3.40 metres.

1.3.5 Nordel Way (east of Highway 91 Interchange)

Table 1.3.5 provides the highway geometric design criteria that are to be applied for the Design and Construction of Nordel Way at the Highway 91 Interchange. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.5

Geometric Design Criteria	Nordel Way (Highway 91 Interchange)
Design Classification	RAD
Posted Speed	60 km/h

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Geometric Design Criteria	Nordel Way (Highway 91 Interchange)
Design Speed	60 km/h
Basic Lanes	4 (2 per direction)
Minimum Radius	130 m
Min. K Factor Sag	18(9) ⁽¹⁾
Min. K Factor Crest	13 ⁽²⁾
Max. Grade	6.0% ⁽³⁾
Min. Grade	0.5% ⁽⁴⁾
Max. Superelevation	6%
Minimum S.S.D.	85 m
Minimum D.S.D.	205 m ⁽⁵⁾
Lane Width	3.60 m ⁽⁶⁾
Shoulder Width Outside	2.00 m ⁽⁷⁾
Shoulder Width Inside	1.00 – 1.80 m ⁽⁸⁾
Median Width	2.6 – 3.4 m ⁽⁹⁾
Design Vehicle	WB20

Notes:

- (1) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (2) The minimum k value for crest curves is based on taillight control.
- (3) The maximum gradient east of Highway 91 shall be the greater of 6.0% and the existing gradient.
- (4) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (5) Decision Sight Distance is for speed/path/direction change on suburban roadway.
- (6) Interchange and intersection deceleration and acceleration lanes shall be 3.6 m wide with 2.0 m outside paved shoulders.
- (7) The outside shoulder width at the Nordel Interchange and for Nordel Way on the east leg approach to the Nordel Interchange is 2.00 m. The outside shoulder width on the existing Nordel Way/Highway 91 Underpass structure may be reduced by up to 1.5 m from the normal shoulder width to 0.5 m to fit the basic lanes within the existing width between the bridge parapets; however, the width between the existing bridge parapets shall not be reduced.
- (8) Continuous Concrete Median Barrier (CMB) shall be provided east of Highway 91 to match the existing (or provided by others) CMB located along Nordel Way under the jurisdiction of Delta. Inside shoulder widths varies depending on the horizontal and vertical alignment. The inside shoulder width shall not be less than 1.0 m between the CMB face and the lane line provided the minimum SSD can be achieved, except on the existing Nordel Way/Highway 91 Underpass structure where the inside shoulder width may be reduced to 0.5 m. Where SSD is restricted by horizontal curvature and the CMB, the inside shoulder width shall be increased to improve the minimum SSD up to a maximum inside shoulder width of 1.80 metres using an asymmetrical median treatment as described in Section 630.02(6) of the BC Supplement to TAC. The 1.80 metres inside shoulder width will provide 3.3 m between the CMB and an object on the road as shown in Figure 630, a Modified Median, in the BC Supplement to TAC.
- (9) A raised median island shall be provided on Nordel Way for the ramp terminal intersections. The minimum width of the raised median island shall be 1.3 m, and 0.4 m shy distance shall be provided from the median curb to the median paint line. Median width varies depending on the horizontal and vertical alignment. In tangent and sections with flat horizontal curves, the median width shall be a

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minimum of 2.6 metres, except on the existing Nordel Way/Highway 91 Underpass structure and approaches where the median width may be reduced to 1.6 m. In areas of tight horizontal curves, the inside shoulder widths shall be increased to provide the BC Supplement to TAC 630 Median Treatment, and the corresponding median width will be increased to 3.40 metres.

1.3.6 Nordel Way (Highway 91C/Weigh Scale Interchange)

Table 1.3.6 provides the highway geometric design criteria that are to be applied for the Design and Construction of Nordel Way at the Highway 91C/Weigh Scale Interchange. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.6

Geometric Design Criteria	Nordel Way at Weigh Scale Interchange (Highway 91C Crossing)
Design Classification	UCU ⁽¹⁾
Posted Speed	40 km/h
Design Speed	40 km/h
Basic Lanes	4
Minimum Radius	55 m
Min. K Factor Sag	9(4) ⁽²⁾
Min. K Factor Crest	4 ⁽³⁾
Max. Grade	6.0%
Min. Grade	0.5% ⁽⁴⁾
Max. Superelevation	4%
Minimum S.S.D.	50 m
Minimum D.S.D.	N/A
Lane Width	3.60 m ⁽⁵⁾
Shoulder Width Outside	1.5 m
Sidewalk Width	1.8 m ⁽¹⁾
Design Vehicle	WB20

Notes:

- (1) A 1.8 m sidewalk shall be provided on the east side of the roadway. On Bridges, the sidewalk shall be barrier separated; where not on Bridges, curb and gutter shall be provided. Concrete Roadside Barrier and an open shoulder design shall be provided on the west side of the roadway.
- (2) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (3) The minimum k value for crest curves is based on taillight control.
- (4) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (5) Lanes shall be widened as required to accommodate the design vehicle. The roadway width for each direction of travel shall be at a minimum as specified in TAC Table 9.16.1 for Case III: Two Lane Operation, for B: Tractor-Trailer, with an additional 0.5 m shy distance on the inside of the roadway

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width to the centerline of the roadway, and an additional 1.0 m shy distance to the outside of the roadway width to the bridge parapet/CRB.

1.3.7 River Road

Table 1.3.7 provides the highway geometric design criteria that are to be applied for the Design and Construction of River Road. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.7

Geometric Design Criteria	River Road
Design Classification	RCU
Posted Speed	50 km/h
Design Speed	50 km/h
Basic Lanes	2
Minimum Radius	90 m
Min. K Factor Sag	13(6) ⁽¹⁾
Min. K Factor Crest	7 ⁽²⁾
Max. Grade	6.0%
Min. Grade	0.5% ⁽³⁾
Max. Superelevation	6%
Minimum S.S.D.	65 m
Minimum D.S.D.	N/A
Lane Width	3.60 m
Shoulder Width Outside	1.5 m ⁽⁴⁾
Bikeway Width	3.0 m ⁽⁴⁾
Design Vehicle	WB20

Notes:

- (1) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (2) The minimum k value for crest curves is based on taillight control.
- (3) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (4) An outside shoulder is not required along the north side of the roadway adjacent to the 2-way bikeway. A 3.0 m 2-way bikeway shall be provided on the north side of the roadway. The 3.0 m 2-way bikeway shall be separated from the roadway by delineators.

1.3.8 River Road Interchange Connecting Road (between the eastbound and westbound ramps)

Table 1.3.8 provides the highway geometric design criteria that are to be applied for the Design and Construction of River Road Interchange Connecting Road. Site specific additional requirements and/or exceptions (if any) to these requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article.

Table 1.3.8

Geometric Design Criteria	River Road Interchange Connecting Road
Design Classification	UCU
Posted Speed	30 km/h
Design Speed	30 km/h
Basic Lanes	2
Minimum Radius	40 m
Min. K Factor Sag	9(4) ⁽¹⁾
Min. K Factor Crest	4 ⁽²⁾
Max. Grade	6.0%
Min. Grade	0.5% ⁽³⁾
Max. Superelevation	4%
Minimum S.S.D.	50 m
Minimum D.S.D.	N/A
Lane Width	3.60 m ⁽⁴⁾
Shoulder Width Outside	1.5 m
Sidewalk Width	1.8 m ⁽⁵⁾
Design Vehicle	WB20

Notes:

- (1) Unbracketed value shown is the minimum k value based on headlight control for sag curves and shall apply where the roadway is unlit. Where the roadway is fully illuminated, the minimum k value shown in brackets, based on comfort control, may be used.
- (2) The minimum k value for crest curves is based on taillight control.
- (3) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (4) Lanes shall be widened as required to accommodate the design vehicle. The roadway width shall be at a minimum as specified in TAC Table 9.16.1 for Case III: Two Lane Operation, for B: Tractor-Trailer.
- (5) A curb and gutter, and sidewalk shall be provided from the east side of the Highway 17 Overpass to the Highway 17 westbound ramp terminal junction.

1.3.9 Interchange Ramps

Table 1.3.9 provides the geometric design criteria to be applied for the Design and Construction of Interchange Ramps. Site specific additional requirements are addressed in Section 1.4 [Specific Design Requirements by Project Section] of this Article. Loop ramps shall have a minimum design speed of 40 km/h, unless otherwise indicated herein. Non-loop ramps shall have a minimum design speed of 50 km/h.

Table 1.3.9

Geometric Design Criteria: Interchange Ramps				
	1 or 2 Lane Loop Ramps	1 or 2 Lane Loop Ramps	1 or 2 Lane Ramps	1 or 2 Lane Ramps
Design Classification	RFD	RFD	RFD	RFD

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Geometric Design Criteria: Interchange Ramps				
Posted Speed	30 km/h	40 km/h	50 km/h	60 km/h
Design Speed	30 km/h ^(1,2)	40 km/h ⁽¹⁾	50 km/h	60 km/h
Minimum Radius	40 m ⁽¹⁾	55 m ^(7,8)	90 m	130 m
Min. K Factor Sag	4 ⁽³⁾	4 ⁽³⁾	6 ⁽³⁾	9 ⁽³⁾
Min. K Factor Crest	4 ⁽⁴⁾	4 ⁽⁴⁾	7 ⁽⁴⁾	13 ⁽⁴⁾
Max. Grade	6.0%	6.0%	6.0%	6.0%
Min. Grade	0.5% ⁽⁵⁾	0.5% ⁽⁵⁾	0.5% ⁽⁵⁾	0.5% ⁽⁵⁾
Max. Superelevation	6%	6%	6%	6%
Minimum S.S.D.	35 m	50 m	65 m	85 m
Minimum D.S.D.	N/A	N/A	145 m ^(9, 12)	175 m ⁽⁹⁾
Lane Width	3.70/4.80 m ⁽⁶⁾	3.70/4.80 m ⁽⁶⁾	3.70/4.80 m ^(6,10)	3.70/4.80 m ⁽⁶⁾
Shoulder Width Outside	2.50 m	2.50 m	2.50 m ⁽⁶⁾	2.50 m
Shoulder Width Inside	1.00 m	1.00 m	1.00 m ⁽¹¹⁾	1.00 m ⁽¹¹⁾
Design Vehicle	WB20	WB20	WB20	WB20

Notes:

- (1) Where minimum standards are required due to constraints, radar speed signs shall be provided to inform drivers when they are exceeding the design speed for the loop ramps.
- (2) 30 km/h design speed loop ramp shall only be permitted on the east side of the River Road Mini-interchange where physically constrained. All other loop ramps shall be designed for a minimum 40 km/h design speed.
- (3) The minimum k value for sag curves is based on comfort control.
- (4) The minimum k value for crest curves is based on taillight control.
- (5) The minimum gradient on vertical tangents is 0.5% for all new and reconstructed roadway sections. Where existing roadway sections are retained with a minimum longitudinal gradient less than 0.5%, the existing gradient may be retained provided that positive drainage is achieved (e.g. with increased roadway cross slopes). Within vertical curves the cross slope shall be greater than 0.50% wherever the longitudinal gradient is in a transition zone and less than 0.50%.
- (6) 3.70 m lane width for two lane ramps. 4.80 m lane width for single lane ramps. The roadway width for two lane ramps shall be at a minimum as specified in TAC Table 9.16.1 for Case III: Two Lane Operation, for B: Tractor-Trailer, with an additional 1.0 m shy distance on the inside and outside of the roadway width to the bridge parapet/CRB.
- (7) The loop ramp radius for the Highway 91/17 Interchange shall be maximized to fit within the available project ROW, and the radius shall be a minimum of 57.5 m to the inside shoulder lane edge line.
- (8) Any loop ramps for the Highway 91/Nordel Interchange shall be maximized to fit within the available project ROW, and the radius shall be a minimum of 58.5 m to the inside shoulder lane edge line.
- (9) Decision Sight Distance is for speed/path/direction change on rural roadway.
- (10) The single lane ramp and outside shoulder width on the existing BNSF Flyover Bridge structure may be reduced to 4.3 m and 1.5 m respectively to fit the highway, ramps and auxiliary lanes within the existing width between the bridge parapets.
- (11) Where SSD is restricted by horizontal curvature and the CMB, the inside shoulder width shall be increased to improve the minimum SSD up to a maximum inside shoulder width of 1.80 metres using an asymmetrical median treatment as described in Section 630.02(6) of the BC Supplement to TAC. The 1.80 metres inside shoulder width will provide 3.30 metres between the CMB and an object on the road as shown in Figure 630, a Modified Median, in the BC Supplement to TAC.
- (12) Minimum DSD of 110 m for the Highway 91C westbound to Highway 17 eastbound on-ramp shall be permitted due to existing vertical geometric constraints.

1.4 Specific Design Requirements by Project Section

In this Section, it has been assumed for description purposes that Highway 17 follow an east/west alignment and Highway 91 runs north/south. All interchanges and intersections described herein shall be Performance Based Connections unless otherwise identified.

The following provides the minimum requirements for the Design of the Highways and Interchanges.

1.4.1 Highway 17

The requirements that shall be incorporated into the Design of this section of Highway 17 include the following:

- (a) An auxiliary lane shall be provided between the River Road/Highway 17 Interchange westbound on ramp the Highway 91C/17 Interchange.
- (b) The outside shoulder width on the BNSF Flyover Bridge structure can be reduced to a minimum of 1.5 m to fit the highway lanes, ramps and auxiliary lanes within the existing width between the bridge parapets; however, the width between the existing bridge parapets shall not be reduced.

1.4.2 Highway 91C

The requirements that shall be incorporated into the Design of this section of Highway 91C include the following:

- (a) A minimum of 3 lanes shall be provided in each direction on Highway 91C between the Nordel Way/Highway 91 Interchange and the Highway 91C/17 Interchange, excluding a short segment between the westbound off ramp and the westbound on ramp at the Highway 91C/Weigh Scale Interchange, which can be 2 lanes.
- (b) An auxiliary lane shall be provided in the westbound direction between the Nordel Way/Highway 91 Interchange and the off ramp to the Provincial Commercial Truck Inspection Facility.
- (c) An auxiliary lane shall be provided in the eastbound direction between the Highway 91C/Weigh Scale Interchange and the Nordel Way/Highway 91 Interchange.

1.4.3 Nordel Way (at Highway 91 Interchange)

The requirements that shall be incorporated into the Design of this section of Nordel Way at the Highway 91 Interchange to form a directional couplet system include the following:

- (a) 3 westbound lanes shall be provided on Nordel Way east of the Highway 91/Nordel Interchange (two lanes will exit at the Nordel Interchange to Highway 91 northbound, one lane will continue westward, and a second westbound through lane shall be provided after the two lane exit to Highway 91 northbound).
- (b) 2 eastbound lanes shall be provided on Nordel Way, east of the Highway 91/Nordel Way Interchange.
- (c) 2 westbound lanes and 1 left-turn lane that will exit to the Highway 91 southbound on ramp shall be provided on Nordel Way west of the existing Nordel Way/Highway 91 Underpass.
- (d) 2 eastbound lanes and 1 auxiliary eastbound lane that will exit to the Highway 91 northbound on ramp shall be provided on Nordel Way at/approaching the Highway 91 Underpass

1.4.4 Highway 91C/17 Interchange

The requirements that shall be incorporated into the Design of the Highway 91C/17 Interchange include the following:

- (a) Eliminate the existing Highway 17/Highway 91C/96 Street (north leg) intersection to create a three-approach interchange configuration.
- (b) Provide full movement free-flow interchange connections between Highway 17 and Highway 91C (with no at-grade junctions permitted).
- (c) All new or modified cut or fill slopes located on contaminated soils shall be capped with 1.0m minimum depth of suitable clean material.
- (d) Retain 96 Street and the existing at-grade railway crossing as a municipal roadway connection and provide a cul-de-sac for 96 Street on the south side of the BNSF Railway.
- (e) Reconfigure the 96 Street/River Road intersection with River Road forming a continuous east/west alignment and 96 Street forming the south leg of the intersection; provide a separate westbound left turn lane along River Road, separate northbound left turn and right turn lanes along 96 Street, and channelize all right turn quadrants.

1.4.5 Highway 17/River Road Interchange

The requirements that shall be incorporated into the Design of the Highway 17/River Road Interchange include the following:

- (a) With the exception of the Highway 17 eastbound to River Road movement, provide full movement connections between Highway 17 and River Road.
- (b) Maximize interchange on/off-ramp spacing and weaving distances with the Highway 91C/17 Interchange.
- (c) A roundabout configuration shall be provided at the Highway 17 westbound ramps and River Road terminal junction, in order to facilitate turnaround movements along River Road.
- (d) The existing Highway 17/BNSF Railway Overpass Bridge shall be retained and restriped to fit the proposed geometrics and laning for the interchange.
- (e) The existing truck turnaround facility at the east end of River Road on the north side of Highway 17 shall be reinstated. The reinstated turnaround shall be designed to accommodate a WB20 design vehicle.
- (f) The existing debris protection along Highway 17 eastbound near 9924 River Road shall be retained or modified in order to protect the adjacent building(s) from highway debris and snow removal operations.

1.4.6 Highway 91C/Weigh Scale Interchange

The requirements that shall be incorporated into the Design of the Highway 91C Interchange/Weigh Scale include the following:

- (a) Provide full movement connections between Highway 91C and Nordel Way on the north side, and between Highway 91C and access to the areas on the south side.
- (b) Retain full movement connectivity to/from the existing Provincial Commercial Truck Inspection Facility along the north side of Highway 91C and the existing truck parking area along the south side of Highway 91C.
- (c) Provide a four-lanes (two lanes per direction) grade separated inter-connection across Highway 91C connecting to Nordel Way.
- (d) Maximize interchange on/off-ramp spacing and weaving distances with the Highway 91C/17 Interchange and the Nordel Way/Highway 91 Interchange.
- (e) Retain the separate westbound exit from Highway 91C to the Provincial Commercial Truck Inspection Facility.
- (f) The ramp terminal junction on the south side of Highway 91C shall be designed to accommodate a future 4-lane collector roadway as a south leg of the junction. The south leg of the junction shall provide access connectivity, up to the northern property boundary of properties 7969 Highway 91C and 7949 104 Street. The location of the access shall be centred along the existing property line between 7969 Highway 91C and 7949 104 Street.
- (g) Provide full movement access connectivity for the existing truck parking area and 8099 Nordel Way situated along the south side of Highway 91C via the Highway 91C/Weigh Scale Interchange. Any abandoned/unused roadway pavement surfaces shall be removed.
- (h) At the ramp terminal junction on the north side of Highway 91C (Nordel Way and Weigh Station Road Intersection), the north leg shall be designed to match the existing roadway template of Nordel Way.

1.4.7 Highway 91/Nordel Way Interchange

The requirements that shall be incorporated into the Design of the Highway 91/Nordel Way Interchange include the following:

- (a) Provide full movement connections between Nordel Way and Highway 91.
- (b) Provide free-flow ramp connections from Nordel Way westbound to Highway 91 northbound, Nordel Way eastbound to Highway 91 northbound, Highway 91 southbound to Nordel Way eastbound and Highway 91 southbound to Nordel Way westbound.
- (c) The Highway 91 southbound to Nordel Way eastbound connection shall be a loop off-ramp comprising a minimum of two lanes crossing both Nordel Way and Highway 91 with the two lanes forming route continuity for Nordel Way eastbound as part of a directional couplet system.

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- (d) The Highway 91 southbound to Highway 91C westbound ramp connection shall tie into the recently upgraded existing ramp and shall diverge to two lanes with one lane as a drop lane to the Provincial Commercial Truck Inspection Facility, and the second lane as a westbound 'add' lane on Highway 91C.
- (e) The Nordel Way westbound to Highway 91 northbound on-ramp connection alignment shall be retained and converted to a free flow ramp.
- (f) Provide a minimum of four through lanes (two lanes per direction) for the grade separated inter-connection along Nordel Way crossing Highway 91. In addition, auxiliary lanes shall be provided for turn lanes and ramp lanes.
- (g) Retain the existing Nordel Way westbound to Highway 91 northbound bus queue-jumper lane connection. The length of the bus queue jump lane shall be maximized to enable buses to enter the on-ramp immediately prior to the on-ramp bullnose with Highway 91.
- (h) All proposed laning along Highway 91 shall be compatible with the Alex Fraser Bridge movable barrier counterflow system.
- (i) The minimum distance between successive ramp physical noses shall be in accordance with the TAC Geometric Design Guide, except along the Highway 91 southbound to Nordel Way eastbound/westbound off-ramp where the minimum distance shall not be less than the existing condition.
- (j) The existing Nordel Way/Highway 91 Underpass structure shall be restriped to provide two lanes westbound and two lanes eastbound with median barrier.

1.4.8 Maintenance Vehicle Access

All existing maintenance vehicle accesses are to be retained, including on the south side of Highway 91C to the BC Hydro high voltage transmission tower. The existing maintenance vehicle access immediately south of the BNSF Railway from 96 Street to the cell tower facility shall also be retained.

1.5 Traffic Engineering

1.5.1 General Requirements

- (a) The Design-Builder's Design shall meet the traffic performance requirements set out in this Article and in the Traffic Operations Requirements ("**Minimum Traffic Performance Criteria**"), except where otherwise previously approved in writing by the Province's Representative in accordance with the Consent Procedure.
- (b) In accordance with Section 1.2(a) of this Part, the Design-Builder's Design shall conform to the following basic principles for the key traffic performance metrics as verified in accordance with the Traffic Operations Requirements:
 - (i) Highway mainline performance – The average speed along the Highway 91 and Highway 91C mainlines shall remain at or above 80% of the posted speed, as measured during the relevant Peak Hour. Permitted exceptions shall only apply to Highway 91C eastbound between Highway 17 and Nordel Connector during the

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PM peak hour, where the average speed along the Highway 91C mainline shall remain at or above 70% of the posted speed for 40% of the time:

- (ii) Interchange Ramp performance – Queues should not be detected within the critical deceleration distance along any Interchange Ramp during the Peak Hour.
 - (iii) Intersection level of service – The individual approach delay shall be less than 55 seconds for signalized intersections during the Peak Hour.
 - (iv) Origin-destination travel times – For the various representative routes encompassing the Provincial Highway and the adjacent Municipal road network, the lower bound of the 95% confidence limits for the average origin-destination travel times of the Design shall be equal to or less than the average travel times provided in the Traffic Operations Requirements for each representative route. Notwithstanding, a maximum 10% variance shall be permitted on up to 25% of the representative routes during each of the AM and PM peaks, provided that such variance results in an improvement to the total travel times stipulated in the Traffic Operations Requirements.
- (c) The Design-Builder shall demonstrate that the interchange configurations in its Design, including Interchange Ramps and adjacent intersections, achieve the Minimum Traffic Performance Criteria. Such performance shall be reported as specified in the Traffic Operations Requirements along with a traffic operations model replicating such performance, both of which shall be submitted to the Province’s Representative under the Consent Procedure.
- (d) The Design-Builder shall use the VISSIM micro-simulation software (V10.00 or newer) and Highway Capacity Manual (HCS7) software to demonstrate that the Minimum Traffic Performance Criteria are met in its Design. The Design-Builder’s model output for the Design shall provide values for Section 1.5.3 [Performance Criteria] of this Part that equal or exceed the Minimum Traffic Performance Criteria.

1.5.2 Base Data

1.5.2.1 Modelled Network

- (a) A model of the Reference Concept for the AM and the PM peak periods is referenced in the Traffic Operations Requirements. The Design-Builder shall use this Reference Concept model with alterations to represent the Design-Builder’s Design. The modelled network outside the scope of the Project shall not be altered by the Design-Builder.
- (b) The traffic performance criteria described in Section 1.5.3 [Performance Criteria] of this Part have been established from the Reference Concept model.

1.5.2.2 Travel Demand

- (a) The travel demand matrices referenced in the Traffic Operations Requirements represent the 2045 design horizon. These travel demand matrices for all vehicle types and for both the AM and PM peak periods shall not be altered by the Design-Builder.

1.5.2.3 Demand Profile

A demand profile for the AM peak period and the PM peak period for the 2045 design horizon is referenced in the Traffic Operations Requirements. This demand profile for the AM and PM peak periods shall not be altered by the Design-Builder.

1.5.2.4 Design Hourly Volumes

The travel demand matrices, demand and the demand profile referenced in the Traffic Operations Requirements shall solely dictate the design traffic performance for the Project. Design hourly volumes in other documentation have been provided for reference only and are not to be used for traffic performance analysis.

1.5.3 Performance Criteria

1.5.3.1 General

The data to be used for in the analysis of any modified modelled network shall be calculated as specified in the Traffic Operations Requirements.

1.5.3.2 System Wide Performance Metrics

- (a) The following system wide performance metrics have been established to determine whether the Design-Builder's model performs in a similar manner as the Reference Concept model:
 - (i) number of vehicles arrived at destinations;
 - (ii) total network travel time; and
 - (iii) Peak Hour (as defined in the Traffic Operations Requirements) origin-destination travel time.
- (b) Values for these performance metrics shall be calculated for the Design-Builder's Design as specified in the Traffic Operations Requirements and shall meet or exceed the Minimum Traffic Performance Criteria.

1.5.3.3 Component Performance Metrics

- (a) The following component performance metrics related to interchanges have been established to determine whether the Design-Builder's model performs in a similar manner as the Reference Concept model:
 - (i) mainline travel speed;
 - (ii) serviced traffic volumes;
 - (iii) delays;
 - (iv) off-ramp queues; and

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- (v) intersection delay.
- (b) Values for these performance metrics shall be calculated for the Design-Builder's Design as specified in the Traffic Operations Requirements and shall meet or exceed the Minimum Traffic Performance Criteria.
- (c) Ramp metering shall not be permitted in the Design-Builder's model.

1.5.3.4 Traffic Engineering Design

In addition to the Traffic Operations Modelling Requirements outlined in this Section 1.5, traffic engineering design analyses shall be conducted for the Performance-Based scope in accordance with the following performance criteria:

- (a) The Design-Builder shall undertake the necessary traffic engineering analysis to demonstrate that the geometric design and configuration of **highway segments, weave sections, merges and diverges** shall accommodate the AM and PM design hour traffic volumes with respect to the following minimum traffic performance criteria as defined in and determined using the methodology prescribed in the Highway Capacity Manual (or VISSIM model in the case of on-ramp 'lane additions'):

- (i) LOS D.

Permitted exceptions shall only apply to the following locations:

- (ii) Highway 91 northbound segment over the Alex Fraser Bridge during the AM peak hour;
 - (iii) Nordel Way to Highway 91 northbound merge segment during the AM peak hour;
 - (iv) Highway 91 northbound to Nordel Way diverge segment during the AM peak hour;
 - (v) Highway 91 southbound segment over the Alex Fraser Bridge during the PM peak hour;
 - (vi) Highway 91 southbound weaving segment between Nordel Way and 72 Avenue during the PM peak hour;
 - (vii) Nordel Way to Highway 91 northbound merge segment during the PM peak hour;
 - (viii) Highway 91 southbound to Nordel Way diverge segment during the PM peak hour; and
 - (ix) Highway 17 eastbound to Highway 91C eastbound merge segment during the PM peak hour.
- (b) The Design-Builder shall undertake the necessary traffic engineering analysis to demonstrate that the geometric design and configuration of signalized intersections, including storage lengths of all left and right turn movements, shall accommodate the AM and PM design hour

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traffic volumes with respect to the following minimum traffic performance criteria as defined in and determined using the methodology prescribed in the Highway Capacity Manual:

- (i) overall intersection LOS D (average vehicle delay less than 55 seconds);
 - (ii) no movement shall exceed LOS D (average vehicle delay less than 55 seconds);
and
 - (iii) no movement shall exceed a v/c of 0.90.
- (c) The Design-Builder shall undertake the necessary traffic engineering analysis to demonstrate that the geometric design and configuration of unsignalized intersections, including storage lengths of all left and right turn movements, shall accommodate the AM and PM design hour traffic volumes with respect to the following minimum traffic performance criteria as defined in and determined using the methodology prescribed in the Highway Capacity Manual:
- (i) overall intersection LOS D (average vehicle delay less than 35 seconds);
 - (ii) no movement shall exceed LOS D (average vehicle delay less than 35 seconds);
and
 - (iii) no movement shall exceed a v/c of 0.90.
- (d) The Design-Builder shall undertake the necessary traffic engineering analysis to demonstrate that the geometric design and configuration of roundabouts identified as Performance Based Connections in Section 1.4 [Specific Design Requirements by Project Section] of this Part, shall accommodate the AM and PM design hour traffic volumes with respect to the following minimum traffic performance criteria as determined using the methodology prescribed in the SIDRA (Version 6 or newer) suite of analysis software:
- (i) overall roundabout LOS D (average vehicle delay less than 55 seconds);
 - (ii) no movement shall exceed LOS D (average vehicle delay less than 55 seconds);
and
 - (iii) no movement shall exceed a v/c of 0.90.
- (e) For adjacent intersections or roundabouts with less than 200 m separation, analysis by the Design-Builder shall demonstrate that the intersections or roundabouts can operate as a network with regard to queue lengths and signal coordination if applicable, and that queues will not spill back into upstream intersections, roundabouts or interchanges

1.5.4 Non Performance Intersection Requirements

Section 1.5.3 [Performance Criteria] of this Part shall not apply to the following locations/movements:

- (a) Eastbound right-turn movement at the Nordel Way and Highway 91 southbound ramp terminal during the PM peak hour;

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- (b) Eastbound left-turn/through movement at the River Road and Highway 17 ramp terminal during the PM peak hour;
- (c) River Road and 96 Street;
- (d) Westbound left-turn movement at the Nordel Way and Nordel Connector/Weigh Station Road intersection during the PM peak hour;
- (e) Northbound left-turn movement at the Nordel Way and Nordel Connector/Weigh Station Road intersection during the PM peak hour; and
- (f) Southbound through movement at the Nordel Way and Nordel Connector/Weigh Station Road intersection during the PM peak hour.

Improvements and final lane configurations required at these locations are described in Article 1 [Laning and Geometrics Design Criteria] of this Part.

1.5.5 Traffic Signals

- (a) Traffic signal coordination shall be implemented on all roadways where signalized intersection spacing is less than 200 metres.
- (b) If municipal traffic signals are to be included in the traffic signal coordination scheme the Design-Builder shall define the coordination scheme and seek approvals from the Municipality.
- (c) The Design-Builder shall coordinate with the Municipality with regard to any modifications that may be required at municipal traffic signals during construction and post-construction. Proposed modifications shall be supported by traffic engineering analysis.
- (d) Traffic engineering checklists and signal timing sheets for the Design of all signalized intersections within the New Project Infrastructure within Provincial jurisdiction shall be developed in accordance with the Electrical and Traffic Engineering Manual and submitted to the Province's Representative pursuant to the Consent Procedure.
- (e) The Design-Builder shall design and install all temporary signal timings that may be required during Construction. For temporary signal timings for traffic signals within Provincial jurisdiction, traffic engineering checklists and signal timing sheets shall be submitted to the Province's Representative in accordance with the Consent Procedure.
- (f) The Design-Builder shall design and implement new signal timing plans to accommodate opening day traffic at all intersections within the New Project Infrastructure. The design of signal timing plans shall meet the performance criteria in Section 1.5.3.4(b) of this Part. At a minimum four signal timing plans (AM, PM, Midday, and off peak) shall be designed and implemented for each signalized intersection. The Design-Builder shall be responsible for estimating opening day traffic volumes. Estimated traffic volumes, traffic engineering checklists and signal timing sheets for signals within Provincial jurisdiction shall be submitted to the Province's Representative in accordance with the Consent Procedure.

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- (g) After opening of the Project to general traffic, the Design-Builder shall review the traffic signal operations at all intersections within Provincial jurisdiction one week, one month, six months and annually thereafter during the warranty period. As part of each review, the Design-Builder shall undertake traffic counts and develop and implement new signal timing plans to meet the performance criteria in Section 1.5.3.4(b) of this Part. Updated signal timing sheets and supporting analysis shall be submitted to the Province's Representative in accordance with the Consent Procedure whenever signal timings are to be adjusted.
- (h) All traffic engineering checklists and signal timing sheets shall be signed and sealed by the responsible engineer, who shall be a Professional Engineer of the appropriate discipline.
- (i) The Design-Builder shall be responsible for obtaining all traffic data that may be required for analysis and signal timing design purposes.

ARTICLE 2 PAVEMENTS

2.1 Pavement Design Criteria

Pavement Design shall be in accordance with Technical Circular T-01/15, except that where Technical Circular T-01/15 refers to the Ministry's Standard Specifications for Highway Construction, the corresponding sections of the DBSS shall apply. The use of alternate pavement design methodologies such as the mechanistic empirical design method is not precluded. Pavement structural design shall be carried out in accordance with Technical Circular T-01/15 for a "Pavement Structure Type A".

2.2 General Requirements

- (a) The construction of pavements shall be in accordance with the DBSS.
- (b) Short sections of highway with varying pavement types (for example asphalt and concrete) are not permitted unless otherwise specified.

2.3 Asphalt Pavements

- (a) For asphalt paving, the payment adjustments given in DBSS Section 502 shall not apply.
- (b) Pavement utilizing Class 1 Medium Mix or Superpave is permitted.
- (c) For all asphalt pavements, final surfaces shall be new asphalt.
- (d) Asphalt overlays shall have a minimum thickness of 50 mm.
- (e) For new construction on Structures, asphalt shall have a minimum thickness of 90 mm with the exception of epoxy asphalt pavement used for orthotropic steel bridge decks.
- (f) Graded aggregate seal coat is not permitted.
- (g) Sulphur asphalt is not permitted.
- (h) In areas of new roadway construction, river sand shall not be used within 1.0 m of the underside of the asphalt, unless otherwise accepted by the Province, acting reasonably, in

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accordance with the Consent Procedure. Where existing roadway sections not requiring reconstruction contain river sand within 1.0 m of the underside of the asphalt, the pavement structure may be retained provided the Design-Builder demonstrates, through geotechnical analysis, that the pavement structure meets the requirements of this Article.

- (i) Asphalt cement shall be Group A, having a penetration grade of 80 – 100 and meeting the requirements of DBSS 952.
- (j) An antistrip additive, from the Recognized Products List, shall be added to all asphalt mixes.

2.4 Concrete Pavements

- (a) Predicted noise levels generated by traffic on concrete surfaces shall be of the same level or less than those generated by traffic on conventional asphalt surfaces.
- (b) The surface skid resistance of concrete surfaces shall be of the same level or greater than that of conventional asphalt surfaces.

2.5 Roughness

- (a) The roughness criteria identified in this Article shall take precedence over the DBSS.
- (b) The roughness for all multi-use paths and all travel lanes shall have an IRI measured in accordance with the DBSS of:
 - (i) less than or equal to 1.6 m/km in 71%; and
 - (ii) less than or equal to 2.1 m/km in 100%.
- (c) Contrary to the DBSS, excluded surfaces shall be limited to:
 - (i) pavement surfaces within 3 m of a Bridge joint; and
 - (ii) Shoulders;
 - (iii) concrete surfaced bridges;
 - (iv) concrete surfaced Bridge approach slabs; and
 - (v) weigh scales.
- (d) All pavements must be smooth, free of bumps, and obvious defects.
- (e) Acceptance criteria for roughness testing shall apply for both asphalt and concrete pavements.

2.6 Pavement Structural Capacity

In addition to the requirements outlined in DBSS 502, the following shall apply:

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- (a) A pavement surface deflection survey shall be carried out using either a Benkelman Beam or Falling Weight Deflectometer (FWD) at a frequency of 50 m along each travel lane. The test points shall be staggered by 25 m along adjacent lanes.
- (b) Benkelman Beaming shall be carried out according to ASTM D4695. FWD testing shall be carried out according to ASTM D4694, with a series of four load applications will be applied to the pavement surface. The first application is a “seating” load to confirm the FWD load plate is firmly resting on the pavement surface. The next three loads will be approximately 40, 50, and 75 kN. The representative rebound deflection calculated as per the Asphalt Institute MS-17, Chapter 6 shall not exceed 0.65 mm.

2.7 Pavement Design

A design report (the “**Pavement Design Report**”) shall be submitted to the Province’s Representative in accordance with the Review Procedure prior to the Interim Design submission. The Pavement Design Report shall contain, without limitation, the following:

- (a) results of field investigations, soil sampling, and laboratory testing;
- (b) rationale for the design parameters selected in developing the pavement design; and
- (c) methodology used as set out in this Article.

ARTICLE 3 STRUCTURAL DESIGN CRITERIA

3.1 Order of Precedence

The Design and Construction of Structures shall be in accordance with the criteria contained in this Article and the following codes and standards, and if there is any conflict between the criteria contained in this Article and any Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) the Bridge Standards and Procedures Manual, including the BC Supplement to CAN/CSA-S6-14;
- (c) the DBSS; and
- (d) CAN/CSA-S6-14.

3.2 General Requirements

The following general requirements apply to all Structures.

3.2.1 Acceptable Products

All products used on the Project shall meet the applicable Project Requirements and shall be in accordance with the intent of the Recognized Product List. The use of products that are not on the Recognized Products List requires written acceptance from the Province’s Representative in accordance with the Consent Procedure. Acceptance shall be subject to the Design-Builder demonstrating sufficient experience with the

proposed product and acceptable performance for the proposed product under conditions and applications similar to those for this Project.

3.2.2 Unacceptable Materials and Systems

In addition to the requirements of Clause 1.4.1 of the BC Supplement to CAN/CSA-S6-14, the following are not permitted to be used on the Project:

- (a) stay-in-place metal formwork, including steel decking;
- (b) proprietary composite steel/concrete girders;
- (c) exposed steel sheet pile walls;
- (d) asphaltic plug bridge deck joints;
- (e) concrete stacking block wall systems;
- (f) extended steel piles (pile extensions above grade);
- (g) unbonded post-tensioning tendons;
- (h) metal bin walls;
- (i) hog fuel (wood waste);
- (j) shredded rubber tires as fill; and
- (k) previously used materials.

3.2.3 Structure Identification Numbers

Structure identification numbers, as assigned by the Province's Representative, shall be incorporated into the Structures in accordance with Ministry standard practices. The Design-Builder shall supply Bridge numeral forms and imprint identification numbers on Bridges that are in accordance with Ministry standard practice.

3.2.4 Structure Parameters Data

As part of the Final Design submission, the Design-Builder shall submit a spreadsheet including all structure parameters data for Structures as identified in Structure Parameters for Delivery by Engineers-of-Record on Ministry Projects.

3.3 New Structures - General

This section includes the requirements for all new Structures required for the Project.

3.3.1 Design Loads

The following requirements shall apply to the new Structures:

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- (a) The live load classification shall be BCL 625.
- (b) For fatigue design, the greater of site specific traffic forecasts over the Design Life of the Structure and Class A Highway AADT shall be used.

3.3.2 Durability and Maintenance

Design for durability and maintenance shall meet the requirements of BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14.

Bridge deck corrosion protection shall be in accordance with the Ministry Supplement Table 8.11.2.3.2 for SCR-Main Roads.

- (a) Deck shall be minimum 225 mm thick, with specified minimum cover to reinforcing of 50 mm.
- (b) All reinforcing steel within the upper 50% of bridge decks and approach slabs including the top mat of deck reinforcing steel and any steel projecting into this zone and all the reinforcing steel in cast-in-place parapets shall be stainless.
- (c) Deck shall have a waterproofing membrane selected from the Hot Rubberized Asphalt Membrane Systems Category of the Recognized Product List, and 100 mm of asphalt.

3.3.3 Clearances

- (a) The minimum vertical clearance to bridge structures shall be 5.0m over all paved highway surfaces, including any on- and off-ramp(s) that pass underneath. The minimum vertical clearance to pedestrian underpasses, sign bridges, and other lightweight structures spanning the highway shall be 5.5m. Long-term settlement of supports, and superstructure deflection and future pavement shall be accounted for in the vertical clearances.
- (b) Horizontal and vertical clearances shall be determined with due regard to requirements for other considerations, including but not limited to life safety, highway design, ventilation, fire, signage and illumination.

3.3.4 Aesthetics

- (a) Bridges shall be designed in accordance with the guidelines in the Manual of Aesthetic Design Practice as well as CAN/CSA-S6-14, using a “Baseline” classification.
- (b) Structural steel and concrete interfaces shall be detailed or protected such that no rust staining of the concrete occurs.

3.3.5 Foundations

Structures shall be designed such that all Foundation deformations, clearances and other performance requirements in this Agreement are met over the Design Life of the Structure. The Design shall ensure that the required vertical and horizontal clearances are met over the Design Life of the Structure without additional intervention such as jacking.

3.3.6 Piers, Abutments, Wing Walls and Return Walls

Water ingress into or onto the Substructures or abutment wall backfill from the Superstructure above shall be prevented. Joints between the Superstructure or end diaphragm and the Substructure shall be waterproofed.

3.3.7 Bridge Deck Joints

- (a) Bridge Decks shall be designed to minimize the occurrence of joints, and no joints over piers will be allowed.
- (b) Bridge Deck joints shall be dimensioned and detailed to allow enough space for joints to be inspected, maintained and replaced without permanent modifications to the Structure
- (c) Integral and semi-integral abutments shall make provision for movement at the interface between the approach slab and the approach roadway pavement structure.
- (d) All deck joints shall provide for safe passage of cyclists and pedestrians.
- (e) Expansion joints shall be tested and proven watertight.

3.3.8 Deck Drainage

- (a) Bridge deck drainage shall meet the requirements of Clause 1.8.2.3 in the BC Supplement to CAN/CSA-S6-14.
- (b) Runoff water from all Bridges shall be discharged in accordance with the drainage and environmental requirements of this Agreement. Direct discharge over water channels, within 5.5m of Railways, multi-use paths or roadways is not permitted.
- (c) The diameter of drain pipe to be installed shall not be less than 200 mm.
- (d) Box girders and other members with internal voids shall be detailed to ensure no standing water accumulates.
- (e) Deck drainage pipes shall not be run through the voids of hollow structural members.
- (f) Drainage water from any Structure shall not be discharged to a drainage layer behind a Substructure or Foundation.
- (g) The drainage system shall be sufficiently robust to resist damage during cleaning and shall resist commonly occurring chemical spillages.

3.3.9 Approach Slabs

Approach slabs shall be provided at all abutments and be designed to mitigate anticipated fill settlements, in accordance with the BC Supplement to CAN/CSA-S6-S14. Approach slabs shall be completely supported by fill.

3.3.10 Jump Slabs

Bridges with short slab type end spans (“**jump slabs**”) to abutments supported on mechanically stabilized earth walls shall be detailed and constructed such that all concrete components and bearings shall have a minimum 750mm access for inspection, and shall have separate approach slabs as required in Section 3.3.9 [Approach Slabs] of this Part. The end span must be supported by an abutment and procedures for jacking and repair of jump slabs and approach slabs in case of settlements shall be developed and included in submissions. Acceptance of this Bridge type shall be contingent on the Province accepting that inspection access and proposed repair procedures are adequate. A minimum of 6m of horizontal clearance shall be provided between the pier face and the adjacent mechanically stabilized earth wall face.

3.3.11 Slope Protection

Concrete slope protection shall be provided for sloped fills under end spans of bridges using the details provided in the BC Supplement to CAN/CSA-S6-14.

3.3.12 Combination Barriers

- (a) All barriers shall be designed in accordance with CAN/CSA-S6-14.
- (b) All Bridges shall have combination barriers in accordance with Section 12.4.6 of the BC Supplement to CAN/CSA-S6-14 on the outsides of the roadway.
- (c) All Bridges shall be in accordance with Section 10.3.6(b) and (c) of this Part.

3.3.13 Bearings

- (a) Enough space and strength shall be provided for bearings to be inspected, maintained and replaced without modification to the Structure. Replacement of bearings shall be possible without significant interruption to traffic flow.
- (b) Bearings shall be restrained from “walking”.
- (c) Bearing seats shall be designed to drain and prevent Ponding.
- (d) Bearings comprised of stainless steel sliding surfaces, PTFE or mechanical components shall be protected by means that can be easily removed for inspection.
- (e) Steel reinforced elastomeric bearings shall be tested for concentric compression in accordance with paragraph (i) below. Steel reinforced elastomeric bearings used to resist seismic forces shall be tested for concentric compression and combined compression and shear in accordance with paragraphs (i) and (ii) below:
 - (i) Concentric Compression Tests:

Each bearing shall be tested as follows using a concentric compression load:

- (A) The testing machine used shall have platens at least 20 mm greater in both plan dimensions than the bearing under test.

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- (B) At least two dial gauge micrometers shall be positioned at the centres of opposite sides of the bearing to measure deformation. When bearings are tested in single vertical stacks, a steel plate shall separate the bearings and a set of dial gauge micrometers shall be installed for each bearing.
 - (C) The load shall be applied at the rate of 1.5 MPa/minute to a load of 7.5 MPa multiplied by the gross plan area. The deformations shall be recorded.
 - (D) The load shall be reduced at the same rate until the pressure on the bearing is 1.5 MPa, and the deformations shall be recorded.
 - (E) The load on the bearing shall be maintained at 1.5 MPa for fifteen minutes and the deformations shall be recorded.
 - (F) The bearing shall be reloaded as in step (C), and steps (D) and (E) shall be repeated.
 - (G) The bearing shall be reloaded to 10 MPa with deformations being recorded after each 1 MPa increment.
 - (H) The compressive stress of 10 MPa shall be maintained for one hour. The deformations shall be recorded at 10 minute intervals within this one hour period.
 - (I) A graph of the pressure versus average deformation with data recorded shall be constructed.
 - (J) The rates of loading specified in steps (C) and (D) also apply to steps (G) and (H).
- (ii) Combined Compression and Shear Tests:
- (A) After completion of the compression tests, all bearings used to resist seismic forces shall be tested in combined compression and shear deflection. Each sample shall be loaded in compression to the applicable combined “Dead Load Other Than Wearing Surface” plus “Dead Load Due to Wearing Surface” in addition to “Vertical Seismic Load”.
 - (B) The compression load shall be maintained while the bearing is subjected to five complete reversed cycles of loading from 0 to + 100% shear strain to 0 to – 100% shear strain. Shearing in both longitudinal and transverse directions at the same time is not required.
 - (C) A continuous plot of the shear load and shear deflection shall be recorded to permit an evaluation of bearing shear stiffness.
- (iii) A bearing shall be rejected if any of the following deficiencies is shown:

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- (A) if the bearing displays bulging patterns under compression load which indicate laminate placement which does not satisfy design criteria and manufacturing tolerances or poor laminate bond;
 - (B) if the bearing has more than three surface cracks which are greater than 2 mm long and 2 mm deep;
 - (C) if the compressive deformation exceeds 7% of the total elastomeric thickness of the bearing due to the application of the sum of the vertical serviceability loads shown on the drawings; or
 - (D) if lack of rubber to steel bond occurs under combined compression and shear tests.
- (f) Seismic isolation systems shall be tested in accordance with Clause 4.10.9 in CAN/CSA-S6-14.

3.4 Existing Bridges and Retaining Walls

Requirements for existing Bridges and retaining walls that are to be retained or modified are addressed in this Section.

3.4.1 Existing Bridges

- (a) The Design-Builder will not be required to design nor construct any seismic retrofit for the existing Nordel Way/Highway 91 Underpass (No 02761), provided that the Province, in its discretion, may request select upgrades to the existing Nordel Way/Highway 91 Underpass through the Province Change process. The Design-Builder shall act reasonably when pricing such potential future Province Change.
- (b) The Design and Construction shall be carried out in such a manner so as not to affect the Highway 17 at BNSF Overhead Sunbury 8264 and the Nordel Way/Highway 91 Underpass, and shall not negatively impact the seismic performance of the Structures. All Design and Construction methods, including but not limited to excavation and ground improvement, shall be chosen and executed such that no settlement or damage of any kind is caused to the existing BNSF Overhead and the Nordel Way/Highway 91 Underpass. In the event of any settlement or damage, the Design-Builder shall restore the BNSF Overhead and/or the Nordel Way/Highway 91 Underpass, as applicable, to their respective pre-construction condition. For the BNSF Overhead, the Design-Builder shall demonstrate by analysis that the seismic performance of the existing Structure is not negatively impacted.

3.4.2 Existing Retaining Walls

Existing retaining walls within the Project Lands that are not to be modified as part of the Project Work are not required to be upgraded to meet the requirements herein for new retaining walls. For existing retaining walls that are lengthened, but not increased in height, the existing portion of the retaining walls are not required to be upgraded to new retaining wall requirements, and new portions of the retaining wall shall be designed to meet the requirements for new retaining walls herein. Existing retaining walls that are increased in height shall be upgraded to meet the requirements herein for new retaining walls.

3.5 New Retaining Walls

In addition to the requirements for new Structures, the following apply to new retaining walls:

- (a) Structural design shall be performed in accordance with this Schedule, the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14.
- (b) Reinforced soil slopes steeper than 70 degrees shall also be considered as Retaining Structures.
- (c) Walls required to retain Bridge embankments adjacent to Bridge Foundations shall be considered abutment walls.
- (d) Mechanically stabilized earth walls with Extensible Reinforcement are not permitted for use as abutment walls or wing walls except Extensible Reinforcement is permitted for abutment walls or wing walls where the abutments are supported by pile foundations.
- (e) Geotextiles are not permitted for use as soil reinforcement.
- (f) Steel used in wire facing or soil reinforcing components of all mechanically stabilized earth walls shall be galvanized and shall have a minimum thickness accounting for corrosion
- (g) For mechanically stabilized earth walls, items not covered by the AASHTO LRFD Bridge Design Specifications shall meet the requirements of the FHWA Guidelines.
- (h) For mechanically stabilized earth abutment walls and wing walls, precast concrete facing panels shall be used and a precast concrete coping shall be used along the top of the walls. Subject to acceptance by the Province under the Consent Procedure, wire-facing walls may be used in lieu of precast concrete facing panels for stand-alone longitudinal walls provided all the requirements of this Article are met. The minimum soil reinforcement length for walls influenced by the abutment footings shall be the greater of 60% of the distance from the top of the levelling pad to the road surface plus two metres or the minimum length required by the AASHTO LRFD Bridge Design Specifications. Any soil reinforcing within a 1:1 slope of an abutment footing or pile cap shall be considered as influenced by the footing.
- (i) The tops of the retaining walls shall be finished in straight-line segments.
- (j) Adequate drainage shall be provided for all retaining walls. Existing walls with substandard drainage shall be retrofitted to provide proper drainage.
- (k) For soil nail walls, the Design shall be in accordance with FHWA Circular No. 7 and shotcrete shall be in accordance with Section 209 of the DBSS.
- (l) Rigid traffic and combination barriers at or above retaining walls shall be considered to be a structural component of the wall and shall meet the requirements for Structures under this Article.
- (m) Subject to acceptance by the Province under the Consent Procedure, two stage MSE walls shall be permitted if all the performance requirements of the retaining walls, concrete facings, and the fills and abutments they retain, including by not limited to durability and settlement, are met.

3.6 Sign, Traffic Signal, Lighting, and ATMS

- (a) The Design-Builder shall design, fabricate and install Structures for Signs, traffic signals, lighting and ITS Equipment in accordance with the BC Supplement to CAN/CSA-S6-14, CAN/CSA-S6-14 and the Electrical and Signing Materials Standards. Levelling nuts below the base plates shall not be permitted.
- (b) Existing Sign Structures may be re-used provided the structural components have been inspected and certified by a structural Professional Engineer as meeting the Project Requirements for ongoing use and provided all clearance requirements are met as per new Sign Structures. All equipment to be re-used shall be power washed clean prior to re-use.
- (c) Undamaged aluminium sign extrusions may be re-used with new sign faces applied.
- (d) Sign Structures shall be designed and constructed as “Other Bridges” for seismic design in accordance with the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14.

ARTICLE 4 SEISMIC DESIGN CRITERIA

4.1 General Requirements and Order of Precedence

The Design-Builder shall comply with the seismic requirements of this Article, and the following codes and standards and if there is any conflict between criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in Article 3 [Geotechnical Design Criteria] of this Part and this Article; and
- (b) Earthquake Time Histories (seismic inputs).

4.2 Seismic Inputs

- (a) The Site Class C (as defined in CAN/CSA S6-14) ground motion time-histories provided in the Earthquake Time Histories shall be used for the Design. This data includes fifteen sets of firm-ground time-history records and the associated uniform hazard response spectrum for each of the following two design earthquake events (the “**Design Earthquake Events**”):
 - (i) 10% in 50 years; and
 - (ii) 2% in 50 years.
- (b) For the purposes of this Article, “firm ground” is defined as Site Class C soils with an average shear wave velocity of between 360 m/s and 760 m/s as per CAN/CSA-SA6-S14.
- (c) For the purposes of this Article, a set of records is comprised of two orthogonal horizontal records.
- (d) The fifteen sets of time-history records are subdivided into three input source categories, representing shallow crustal earthquake motion, deep in-slab earthquake motion, and

subduction interface earthquake motion, respectively, with each category containing five sets of records. All fifteen sets of time-history records shall be used in analyses for the Design.

- (e) Site specific ground motions shall be developed using generally accepted ground response analysis methods for sites where no firm ground exists at the surface. Use the horizontal firm ground records as Seed Records.
- (f) To develop site-specific response spectra, the following steps shall be taken:
 - (i) For a given Design Earthquake Event, assemble the results of site response analysis separately for each of the three seismic input sources (i.e. crustal, in-slab and interface). Then calculate the mean of each of the five sets of responses.
 - (ii) The maximum response of the mean (acceleration) at a given period from the three seismic input sources shall be used for the Design.
 - (iii) Repeat the above two steps for each of the Design Earthquake Events described in Section 4.2 of this Article.
 - (iv) Site specific response spectra for each of the Design Earthquake Events shall not be less than 80% of the code-based spectra for the applicable site class using non-liquefied soil properties.

4.3 System Level Seismic Performance Criteria

All Bridges, including single-span Bridges, shall comply with the performance criteria specified in, and shall be designed in accordance with, the Performance Based Design requirements of the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14 for “Major Route Structures”.

The EGBC Seismic Design Guidelines will apply to this project. The EGBC Seismic Design Guidelines provide guidance in the consistent and appropriate application of the performance-based seismic bridge design. The “Engineer of Record – Bridge Seismic Design Assurance Statement” included in Appendix A thereof will be required for all Bridges.

The Performance Criteria for Major Route Bridges (restated from the BC Supplement to CAN/CSA-S6-14 except where shown in italics) are:

Seismic Ground Motion Probability of exceedance in 50 years (return period)	Service	Damage
10% (475 years)	Immediate	Minimal
2% (2475 years)	Service Disruption	Extensive

4.3.1 Damage Level Definitions:

4.3.1.1 Minimal Damage

- (a) General: Bridge shall sustain minor damage that does not affect the performance level of the structure.

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- (b) Concrete Structures: Concrete compressive strains shall not exceed 0.006 and flexural reinforcing steel strains shall not exceed 0.010.
- (c) Steel Structures: Steel strains shall not exceed yield. Local or global buckling shall not occur.
- (d) Connections: Connections shall not be compromised
- (e) Displacements: Residual displacement, settlement, translation or rotation, of the structure of foundations, including retaining and wing walls, shall not compromise the performance level.
- (f) Bearings and Joints: Shall not require replacement except for possible damage to joint seal.
- (g) Restrainers: Negligible damage and no loss of displacement capacity to restraining systems or connected elements.
- (h) Foundations: Foundation movements shall be limited to only slight misalignment of the spans or settlement of some piers or approaches that does not interfere with normal traffic, provided that no repairs are required. *In-ground hinging of deep foundation elements is not permitted.*

4.3.1.2 Extensive Damage

- (a) General: Inelastic behaviour is expected. Members may have extensive visible damage, such as spalling of concrete and buckling of braces but strength degradation is not permitted. Members shall be capable of supporting the dead plus 1 lane of live load in each direction (to account for emergency vehicles), including P-delta effects, without collapse.
- (b) Concrete Structures: Extensive concrete spalling is permitted but the confined core concrete shall not exceed 80% of its ultimate confined strain limit. Reinforcing steel tensile strains shall not exceed 0.05.
- (c) Steel Structures: Global buckling of gravity load supporting elements shall not occur
- (d) Connections: There may be significant joint distortions but damage connections must maintain structural integrity under gravity loads.
- (e) Structural displacements: There may be permanent structural offsets as long as they do not prevent use by restricted emergency traffic after inspection or the bridge, nor preclude return of full service to the bridge after major repairs.
- (f) Bearings and Joints: The bearings may be damage or girders may become unseated from bearings, but girders shall have adequate remaining seat length and connectivity to carry emergency traffic. Bearings and joints may require replacement.
- (g) Restrainers: Restraining systems might suffer damage but shall not fail.
- (h) Foundations: Foundation lateral and vertical movements must be limited such that the bridge can be used by restricted emergency traffic. Foundation offsets shall be limited such that repairs can bring the structure back to the original operational capacity. Materials for deep foundation elements that are designed to incur tensile stresses shall be specified to ensure sufficient ductility. In-ground hinge strains shall be limited to $0.75 \epsilon_{cu}$ for concrete and 0.02

for steel, and the design shall demonstrate that the foundations will retain full dead and live load carrying capacity without repair. On all Bridges where piers and/or abutments are supported on deep foundation elements, the Design-Builder shall install instrumentation in one deep foundation element for each pier and abutment. The instrumentation shall be installed to a depth of 10m below the lowest elevation of the predicted liquefaction. The Design-Builder shall demonstrate that its proposed design can determine the deflected shape of the pile after an earthquake and prove if plastic hinges have formed and the strain limits described herein are met.

4.4 Foundations

4.4.1 Liquefaction

- (a) Liquefaction effects shall be assessed and accounted for in the Design including ground movements such as settlements and lateral displacements due to flow liquefaction or cyclic mobility, cyclic degradation effects and flow slide potential, seismic soil-structure interaction including kinematic and inertial interactions where appropriate, down drag forces on deep foundations, seismic induced earth pressures on earth retaining walls, and seismic induced pore pressure build up and pore pressure redistribution. At least two methods, one of which shall be based on 2-dimensional analysis, should be utilized to evaluate a likely range of potential lateral displacements. Engineering judgement shall be used to determine lateral displacement values to be used in the assessment of the bridge performance. The assumptions, limitations, and applicability of the chosen methodologies shall be assessed.
- (b) Foundations in soils susceptible to liquefaction shall be designed to have sufficient lateral capacity to resist the forces generated by the soils. Strategies adopted to limit deformation shall be identified. Liquefaction-induced ground displacements and the corresponding lateral loads shall be considered for the Design Earthquake Events.
- (c) Deep foundations shall be designed in accordance with the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14. Materials for deep foundation elements that are designed to incur tensile stresses shall be specified to ensure sufficient ductility. Material and construction specifications for deep foundation elements including testing requirements and acceptable criteria shall be developed and included in the geotechnical design submissions, and shall be Independently checked in accordance with Article 3 [Checking of Structures] of Part 3 of this Schedule.
- (d) 2-Dimensional seismic loading-induced deformation analysis shall be performed to demonstrate that the seismic performance requirements are met for all bridges, slope, embankments and retaining wall within close proximity to the structure. The input ground motion time-histories as described in this Article shall be used in the seismic deformation analysis taking into consideration the anticipated reductions in shear strength and stiffness of the soil due to strong shaking. These analyses shall be performed using a computer code that is capable of taking into consideration the non-linear soil behaviour, pre- and post-liquefaction stress-strain strength behaviour of soils, soil-structure interaction effects, and time domain base input excitations. For slope, embankments and retaining walls >3m in height and not in close proximity to bridges, simplified methods calibrated with the complex analysis used in close proximity to the bridges may be used. These methods and their calibration shall be subject to prior acceptance by the Province in accordance with the Consent Procedure.

4.4.2 Slopes, Embankments and New Retaining Walls

- (a) New embankments shall meet the static design requirements as defined in Table 6.2b of the BC Supplement to CAN/CSA-S6-14.
- (b) Existing adjacent and dependent embankments shall not be negatively impacted by new embankment construction with respect to the existing static design condition of the existing adjacent and dependent embankments. In the event of any damage to the existing adjacent and dependent embankments, the Design-Builder shall restore such embankments to their pre-construction condition.
- (c) Slopes, embankments and new retaining walls in close proximity to a Bridge shall meet the seismic performance requirements of the Bridge.
- (d) For the purposes of this Section 4.4.2, Highway 17, Highway 91C, Nordel Way crossing Highway 91 and Highway 91 shall be considered 'major' routes, along with new or reconstructed interchange ramp alignment connections between these 'major' routes. Reconstructed shall mean interchange ramp alignment connections that are widened and paved by greater than 1m from existing or modified in grade by greater than 0.5m elevation.
- (e) For 'major' route new slopes / embankments and new retaining walls not in close proximity to a Bridge, that are higher than 3m measured vertically from bottom of ditch to edge of roadway shoulder, the deformations of new slopes / embankments and new retaining walls shall be limited such that not less than 50% of the travel lanes, rounded to the nearest whole number, are available for use immediately after seismic motions with a probability of exceedance of 10% in 50 years.
- (f) For 'major' route existing slopes / embankments / retaining walls not in close proximity to a Bridge, that are higher than 3m measured vertically from bottom of ditch to edge of roadway shoulder, the performance shall be such that not less than 50% of lanes, rounded to the nearest whole number, are available for use within two weeks after seismic motions with a probability of exceedance of 10% in 50 years. Full access shall be restorable within four weeks.
- (g) For 'major' route new slopes / embankments and new retaining walls not in close proximity to a Bridge, and that are lower than 3m measured vertically from bottom of ditch to edge of roadway shoulder, and for non-'major' route interchange ramp and cross-street new slopes / embankments, and new retaining walls not in close proximity to a Bridge, performance shall be such that not less than 50% of lanes, rounded to the nearest whole number, are available for use within two weeks after seismic motions with a probability of exceedance of 10% in 50 years. Full access shall be restorable within four weeks.
- (h) Notwithstanding the requirements outlined herein, for existing soil mounds of the existing Sunbury intersection and new fills constructed into and onto the existing Sunbury soil mounds within the Sunbury boundaries as agreed between the Design-Builder and the Province, seismic design criteria shall not apply.
- (i) New retaining walls not in close proximity to a Bridge, that are higher than 3m measured vertically from bottom of ditch to edge of roadway shoulder, shall be designed so that no collapse of the retaining wall shall occur during or following the 2475-year ground motion.

4.5 Seismic Analyses

- (a) As a minimum, the Design-Builder shall perform the seismic analyses as specified in BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14
- (b) In all cases, analyses shall be focused on determining the expected seismic deformations and the performance of the Structures.
- (c) Damping levels shall be consistent with the deformations and inelastic behaviour expected in the relevant Foundations and Structures and shall be supported by relevant analyses and experimental evidence.
- (d) Effects of soil liquefaction that may occur during seismic shaking shall be considered in the modeling, analyses, proportioning and seismic detailing of Structures.
- (e) Sensitivity studies using appropriate bounds on soil, foundation, and structure parameters shall be carried out during design to exclude unacceptable failure modes or unacceptable performance of the foundations or structure.
- (f) In addition to the analysis requirements of the BC Supplement to CAN/CSA-S6-14 for the structure in the non-liquefied condition, the structure shall be analyzed for the liquefied condition using resistance parameters such as p-y curves, modulus of subgrade reaction, and/or t-z curves appropriate for liquefiable or cyclically mobile soil conditions. The design response spectrum shall be the same as that used in the non-liquefied condition. The structure shall be designed for the combined effects of 50% inertial demands and 100% kinematic effects using the larger of the inertial demands from the analysis of the liquefied and non-liquefied condition. Where in-ground pile hinges are expected, explicit piles foundation modelling shall be utilized with individual piles modelled using distributed soil springs over the entire length of the pile.

4.6 Seismic Design Strategy Memorandum

The Design-Builder shall develop a seismic design strategy memorandum (the “**Seismic Design Strategy Memorandum**”) to be submitted to the Province’s Representative as part of the Interim Design and Final Design submissions, which shall establish how the seismic requirements of the Project will be accommodated in the Design and shall include details of subsurface and groundwater conditions geotechnical and structural analysis methods and results, assumptions, load paths, displacement estimates, specialized seismic devise and systems.

4.7 Seismic Performance Drawing

The Design-Builder shall provide a drawing indicating the expected damage to the Bridge components for the different design ground motions. This drawing shall be in the format of, and with the information shown on the Seismic Performance Drawings Template located in the Data Room.

ARTICLE 5 GEOTECHNICAL DESIGN CRITERIA

5.1 General

- (a) The provisions of the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14 Section 6 (Foundations and Geotechnical Systems), and Technical Circular T-04/17 shall apply unless otherwise provided in this Article.
- (b) The Province will make available to the Design-Builder, which the Design-Builder shall use in its entirety, approximately 145,000 m³ of granular material currently used for preload on Highway 99. This material is located along Highway 99 southbound in Richmond (situated between Westminster Highway and Blundell Road), and along Highway 99 southbound in Delta (situated between Highway 17 and 104 Street). The Contract Price shall reflect removing, hauling, and placing this material into the New Project Infrastructure, and include disposal of any temporary drainage infrastructure previously installed in the preload material. The Design-Builder shall verify that this granular material is free from any unsuitable materials (including invasive plants), prior to placement on the Project Site. Post removal, the remaining ground along Highway 99 shall have a cross fall matching the existing roadway such that positive drainage into the adjacent ditch is maintained.

5.2 Slope Stability

- (a) New and modified slopes and embankments shall meet the static design requirements as defined in Table 6.2b of BC Supplement to CAN/CSA-S6-14. For seismic design of all new or modified cut and fill slopes or embankments refer to Article 4 [Seismic Design Criteria] of this Part.
- (b) All new or modified cut and fill slopes shall be provided adequate protection against erosion and shallow slope movement. Except in the case of slopes under the end spans of overpass and underpass Bridges, the Design of such protection shall be in accordance with the Manual of Control of Erosion and Shallow Slope Movement. For slopes under the end spans of overpass and underpass Bridges, slope protection shall be provided in accordance with Article 3 [Structure Design Criteria] of this Part.

5.3 Settlement

Highway embankments and bridge approach fills shall meet the following criteria:

- (a) At 2 years after construction (warranty):
 - (i) maximum estimated differential settlement from the abutment to the grade supported end of the approach slab shall not exceed 25 mm;
 - (ii) maximum estimated settlement at any point on the approach fill shall not exceed 150 mm;
 - (iii) maximum estimated deviation in longitudinal grade from initial design grade due to settlement at any point on the approaches shall not exceed 0.3%, as measured over a 20 m length; and

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- (iv) estimated changes in grades shall be consistent with the criteria for pavement design, and shall be limited such that pavement drainage is maintained, Ponding and sheeting of water is prevented, and the function of culverts and ditches is preserved.
- (b) At 25 years after construction:
 - (i) maximum estimated differential settlement from the abutment to the grade supported end of the approach slab shall not exceed 75 mm;
 - (ii) maximum estimated settlement at any point on the approach fill shall not exceed 300 mm;
 - (iii) maximum estimated deviation in longitudinal grade from initial design grade due to settlement at any point on the approaches shall not exceed 0.6%, as measured over a 20 m length; and
 - (iv) estimated changes in grades shall be consistent with the criteria for pavement design, and shall be limited such that pavement drainage is maintained, Ponding and sheeting of water is prevented, and the function of culverts and ditches is preserved.

5.4 Lightweight Fills

- (a) All lightweight fills shall be adequately protected from wheel loads, ground water, road salts, weather and fire resistance, flotation under flood conditions, fuel spills and contaminated soils. The lightweight fill protective membrane shall not be compromised by identified contaminated soils.
- (b) Where walls are used to contain flammable lightweight fills, the walls shall provide a minimum 2-hour fire rating.
- (c) Foundation systems (sign or abutment foundations for example) or landscaping above the lightweight fills shall be designed such that protective membrane covers required to protect the lightweight fill are not compromised.
- (d) Flotation forces corresponding to inundation of the fill to the 200 year flood level shall be considered in the design of lightweight fills, regardless of any flood protection provided for the area in which the fill is to be constructed. The 200 year flood levels shall be obtained from the local diking authorities.
- (e) Expanded Polystyrene (“**EPS**”) lightweight fills shall meet the following requirements:
 - (i) EPS shall be supplied in the form of blocks. It shall be classified as to surface burning characteristics in accordance with CAN/ULC-S102.2-03-EN, having a flame spread rating not greater than 500;
 - (ii) The minimum compressive strength measured in accordance with ASTM D1621 shall be 100 kPa at a strain of not more than 5%;

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- (iii) The density of EPS shall not be less than 22 kg/m³;
- (iv) EPS blocks shall be fully wrapped with a black polyethylene sheeting with a minimum thickness of 0.254 mm (10-mil) or equivalent;
- (v) Polyethylene sheeting joints shall be overlapped by a minimum of 0.5 m and sealed; and
- (vi) EPS blocks shall have a minimum 1.2 m clean granular material cover vertically and horizontally for embankment fills, and a minimum 1.2 m clean granular material cover vertically for structures with vertical wall panels.

5.5 Use of Timber Piles for Ground Improvement

- (a) Timber piles, if used for ground improvement, must be installed permanently below groundwater level.
- (b) Timber piles shall not be used as Foundations supporting Structures, utility poles or highway sign bases.

ARTICLE 6 ELECTRICAL, SIGNALS AND LIGHTING DESIGN CRITERIA

6.1 Order of Precedence

The Design for all electrical, lighting, and signals shall be in accordance with the criteria contained in this Article and the following codes and standards, and if there is any conflict between criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Electrical and Traffic Engineering Manual and applicable Technical Bulletins included in the Reference Documents;
- (c) Electrical and Signing Materials Standards;
- (d) Standard Electrical Equipment Maintenance Manual;
- (e) Econolite Cobalt Controller Unit Programming Guide;
- (f) TS2 Traffic Controller Assembly Manual;
- (g) the applicable documented specifications of the Municipality;
- (h) Pedestrian Crossing Control Manual;
- (i) Traffic Management Manual; and
- (j) MMCD.

6.2 Materials – General Requirements

- (a) All electrical products used in the Project are to be selected from the Recognized Products List. The use of electrical products not on the Recognized Products List requires written acceptance from the Province's Representative in accordance with the Consent Procedure. All materials used within municipal jurisdictions shall be in accordance with the applicable standards of the Municipality.
- (b) All equipment to be re-used shall be power washed clean prior to re-use. Luminaire poles to be re-used shall meet current Ministry Standards and be inspected and certified for re-use by a structural Professional Engineer.
- (c) Existing traffic signal equipment, poles and foundations installed later than 2006 may be reused provided they are in good condition, meet Ministry Standards, and are certified structurally sound by a structural Professional Engineer.
- (d) The Design-Builder shall provide the Province with a list of equipment proposed for disposal prior to removing any electrical equipment. The Province may direct the Design-Builder to return some of the to be removed equipment such as luminaire poles, signal poles, sign poles, service equipment and traffic controllers to the Ministry Electrical Maintenance Contractor Yard. All other removed equipment shall be properly disposed of off-site by the Design-Builder.

6.3 Power Distribution

- (a) Electrical equipment on this Project that falls under municipal jurisdiction shall be provided with separate metered power sources from those under provincial jurisdiction.
- (b) All new electrical service and power distribution equipment shall be provided. No existing equipment shall be retained for the permanent installation with the exception of existing electrical services on Highway 17.
- (c) All electrical services shall be metered in accordance with BC Hydro standards
- (d) 347/600V power distribution is permitted to support lighting systems. A separate 120/240V conduit system will be required on all roadways to support future ITS and non-lighting needs.
- (e) The Design-Builder shall undertake all coordination with power Utility Suppliers for all required servicing and shall provide a list of all electrical loads to the power Utility Suppliers, as required. The Design-Builder shall coordinate preparation and submittal of service applications with the Province's Representative. The Design-Builder shall provide copies of all service applications to the Province's Representative at the time of submission to the power Utility Suppliers.

6.4 Lighting

- (a) All lighting shall be dark sky compliant. Light trespass and disability glare for drivers shall be minimized.
- (b) Unless otherwise provided in this Article, all lighting shall be LED technology.

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- (c) Highmast lighting is not permitted.
- (d) Luminaires on Structures shall have safety cables designed to meet ANSI C136.31 requirements for vibration.
- (e) Full continuous lighting shall be provided for roadways, all connections (i.e. intersections, roundabouts, ramps, and interchanges) and the lighting levels shall meet or exceed the design criteria outlined in the Electrical and Traffic Engineering Manual.
- (f) Roundabouts have more complex visibility considerations than a typical intersection. The effectiveness of auto headlights are limited in a roundabout due to the constrained curve radius, making the roadway lighting system very important for the nighttime visibility of obstructions and hazards. Designer shall make special consideration for the illumination of pedestrians in crosswalks.
- (g) Lighting on municipal roads shall meet the applicable standards of the Municipality.
- (h) All pedestrian, cyclist and multi-use path routes shall be provided with full continuous lighting. Lighting levels shall meet or exceed the design criteria outlined in the Electrical and Traffic Engineering Manual.

6.5 Traffic Signals

6.5.1 Ministry Traffic Signals

- (a) New traffic signals shall be designed and installed where warranted in accordance with the Electrical and Traffic Engineering Manual.
- (b) The Design-Builder shall be responsible for modifying existing traffic signals to suit Traffic Management requirements or the Design-Builder's Design, including staged works. This shall include, but not be limited to, modifications to signal timing design, phasing, signal poles, signal head, cabling, inductive loop detectors, hardware and software. Modifications are to be in accordance with the Electrical and Traffic Engineering Manual.
- (c) Traffic engineering checklists and signal timing sheets shall be prepared for all new and modified signals and submitted to the Province with the Final Design submission in accordance with Article 1 [Laning and Geometrics Design Criteria] of this Part.
- (d) All traffic signal displays shall be 300mm.
- (e) All traffic signals shall be equipped with emergency pre-emption in accordance with municipal requirements.
- (f) All traffic signals shall be equipped with uninterruptible power supplies.
- (g) The Design-Builder shall provide a 50mm RPVC conduit between the signal controller conduit system and the ITS conduit system.

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- (h) The Design-Builder shall supply and install Econolite Cobalt traffic controllers programmed compliant with the Econolite Cobalt Controller Unit Programming Guide, for all new and temporary signal installations.
- (i) The Design-Builder shall supply and install NEMA TS-2 Type 1 traffic controller cabinets compliant with the TS2 Traffic Controller Assembly Manual.
- (j) All traffic signals shall be tested, programmed, and commissioned by the Design-Builder
- (k) Existing traffic signal controllers and controller cabinets not required by the Design-Builder shall be removed and delivered to the Ministry Electrical Maintenance Contractor Yard.
- (l) Two dedicated 50mm conduits shall be installed between all traffic controller cabinets that are located within 500m of each other to accommodate hardwire interconnection.

6.5.2 Municipal Traffic Signals

The Design-Builder shall be responsible for liaising and coordinating with the Municipality for any modifications that may be required to municipal traffic signals, and shall be responsible for the operational control of municipal traffic signals in accordance with Section 5.2(c) of Part 1 [General Provisions] of this Schedule.

6.6 Electrical Cabinet and Kiosks

Power cabinets and kiosks shall meet the following requirements:

- (a) Provide enclosures that meet the requirements of Section 402 of the Electrical and Signing Materials Standards.
- (b) Supply enclosures manufactured by Province approved suppliers.
- (c) In addition to the requirements outlined in Section 402 of the Electrical and Signing Materials Standards, provide extruded polystyrene insulated walls, door and ceiling for each cabinet. The insulation shall have a minimum “R” rating of 4.5.
- (d) Provide a fold down shelf permanently fastened to each door for holding testing equipment or documentation.
- (e) Provide adequate power supplies to accommodate equipment.
- (f) Supply all cabinets with a complete set of their respective as-built design drawings in the plan pouches.

6.7 Temporary Lighting During Construction

- (a) All existing lighting shall be maintained in operational order during Construction until such time as replacement temporary or permanent lighting is energized.
- (b) Temporary illumination shall be provided for the roadways to accommodate traffic detours in accordance with the Reference Documents specified in this Article.

ARTICLE 7 DRAINAGE DESIGN CRITERIA

7.1 Order of Precedence

Drainage Design and Construction shall be in accordance with the criteria contained in this Article and the following codes and standards and, if there is any conflict between the criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Stormwater Management Plan;
- (c) BC Supplement to CAN/CSA-S6-14;
- (d) BC Supplement to TAC;
- (e) Technical Circular T-06/15;
- (f) applicable requirements of the Table of Commitments;
- (g) the OEEA;
- (h) the DBSS;
- (i) Culvert and Fish Passage Fact Sheet;
- (j) the applicable documented standards of the Municipality;
- (k) Burns Bog Ecological Conservancy Area Management Plan; and
- (l) Metro Vancouver Stormwater Design Guidelines.

7.2 General Design Basis

The Design of the drainage system shall be based on the following requirements:

- (a) The Design-Builder shall develop a drainage design in accordance with the design goals stipulated in the Stormwater Management Plan.
- (b) The Design-Builder shall be responsible for developing a SWMM model to demonstrate the hydraulic performance of the Major Drainage Design for the 100-year return period, 2- and 5-day duration design storms for the following development stages:
 - (i) immediately post Substantial Completion; and
 - (ii) through the duration of the drainage infrastructure design life, considering projected climate change and potential future developments that would increase runoff flowing into all areas that drain to the Silda and Gravel Ridge downstream of the Burns Bog Water Control structures located at 96th Street and on the west side of Highway 91 (the “**Impacted Drainage Area**”).

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- (c) Design flow hydrographs will be provided to the Design-Builder for flows out of Burns Bog, at the existing 96th Street and the proposed Highway 91 water control structures for the 100 year 2-day storm duration peak flood event for current climate and projected climate change conditions:
- (d) The Design-Builder shall be responsible for calculating design flows from the Impacted Drainage Area downstream of the water control structures in accordance with the BC Supplement to TAC.
- (e) The existing maximum water surface elevations within the Impacted Drainage Area, stated in the Stormwater Management Plan, shall not increase immediately post project or through the duration of the drainage infrastructure Design Life.
- (f) Drainage channels shall be designed to convey peak flows while meeting the following additional criteria:
 - (i) Convey peak 100-year return stormwater flows while maintaining water levels a minimum of 350 mm below the top of pavement.
 - (ii) Surcharging of outlet controlled culverts within the Major Drainage Channels to optimize channel storage is permitted, provided the backwater profile does not negatively impact adjacent roads or properties and maximum headloss is less than 0.3 m.
 - (iii) Convey peak 10-year return stormwater flows while maintaining water levels below the bottom of the adjacent highway SGSB layer.
 - (iv) Major Drainage Channels adjacent to Burns Bog, shall be designed to prevent overflows into the Bog during typical annual flow conditions and limit overflows as feasible during a 100-year return flow event.
- (g) The drainage system shall only outfall to the Fraser River at the following:
 - (i) via the existing pump station on the 96th St ditch (the “Gravel Ridge” pump station); and
 - (ii) via the existing flood box at the Silda ditch outfall.
- (h) All drainage infrastructure and conveyance of flows are to have no impact upon the farming irrigation water supply.
- (i) All abandoned road surfaces are to be stripped and revegetated in accordance with the DBSS to reduce the impervious area.
- (j) Ditch and culvert invert elevations shall not be raised from existing conditions except where it is shown by the Design-Builder that the increase does not negatively impact drainage and irrigation in the Impacted Drainage Area.
- (k) Project runoff shall not increase erosion potential in receiving systems.

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- (l) No existing channels/pipes shall be reduced in size/capacity as a result of the Design.
- (m) All culverts shall have a minimum structural Design Life of 50 years. The Design-Builder shall undertake the necessary analysis to demonstrate that the minimum structural Design Life criteria is met.
- (n) Culverts/pipes to be retained and/or extended shall be inspected and restored to their free flow capacity. Plugged or partially plugged culverts/pipes retained and required for drainage shall be cleared of all debris/silt.
- (o) Highway cross culverts and flow control structures that will contain water for most of the year shall be designed/constructed to facilitate dewatering for maintenance. A parallel diversion pipe 600mm diameter may be necessary for long and otherwise not readily dewaterable pipes/culverts. Notwithstanding, a 600mm dewatering pipe shall be provided at the new Silda culvert crossing Highway 91C.
- (p) Pedestrian and cycling facilities shall be designed with adequate drainage such that no Ponding occurs during a 5-year return period design storm. A minimum of 2% cross-fall shall be applied to all travelled pedestrian and cycling surfaces.
- (q) Use of the rational method, as defined in the BC Supplement to TAC, shall be limited to the design of Drainage Structures with a catchment area less than 1.0 km² unless otherwise agreed with the Province.
- (r) The Design description of the performance and performance criteria of the proposed drainage system shall be provided in a drainage design report to be submitted pursuant to the Consent Procedure.
- (s) The Design shall minimize highway runoff infiltrating Burns Bog.

7.3 Stormwater Quality Criteria

- (a) The Design-Builder shall meet applicable stormwater quality criteria as outlined in the Design-Builder's Construction Environmental Management Plan, including the Surface Water Quality and Sediment Control Subplan, required under Schedule 6 [Environmental Obligations] of this Agreement.
- (b) The Design-Builder shall carry out the Project Work in a manner that protects and maintains surface and groundwater resources, both within and outside the Project Site, including drinking water sources and infrastructure (private groundwater wells).
- (c) The Design-Builder shall be responsible for planning, scheduling and performing the Project Work in such a manner that the quality and quantity of water flowing from the Project Site, is, at all times, acceptable to all relevant Environmental Authorities, and shall take immediate action to correct any deficiency in water quality.
- (d) During Construction, the Design-Builder shall undertake water quality sampling that meets the Water Quality Guidelines – Working and the Water Quality Guidelines – Approved at or before discharge points from new interchange or overpass structures into watercourses supporting existing fish or fish habitats (for example, Class A or A(O) fish or fish habitat)

through the use of stormwater management facilities and current water quality improvement Best Management Practices.

- (e) The drainage system shall incorporate appropriate water quality treatment infrastructure (e.g. stormwater detentions ponds, system retention, bio filtration swales etc.). The water quality design storm shall be the 6 month return period 24-hour duration storm.

7.4 Specific Design Requirements and Reference Concept Drainage

7.4.1 Specific Design Requirements

- (a) The Design-Builder shall adopt the stormwater conveyance route shown in Figure A-1 of the Stormwater Management Plan. This route comprises a system that collects runoff from north of Nordel Way and east of Highway 91 and conveys it via three existing culverts beneath Highway 91 to a new control weir on the existing ditch west of Highway 91. The stormwater is then conveyed via new pipes and new/improved ditches, south of Highway 91C, to the existing Highway 17 culvert before flowing to the Gravel Ridge pump station via the 96th Street ditch.
- (b) The stormwater conveyance route described in paragraph (a) above shall include installing a Major Drainage channel connecting the Highway 91 west ditch to the 96 Street ditch, providing piped connections through:
 - (i) the Ministry Truck Parking Facility; and
 - (ii) the undeveloped property adjacent to the east of the Ministry Truck Parking Facility (8099 Nordel Way).

Additionally, a connection from the major drainage channel to the existing Silda ditch shall be provided, including:

- (iii) a new cross culvert under Highway 91C; and
- (iv) a piped connection through properties 9858, 9870 and 9888 River Road located north of Highway 91C. The Design-Builder will be required to obtain a Permit from the Port Authority through the Port Authority's Project and Environmental Review process.

The enclosed drainage infrastructure described herein shall meet highway loading requirements.

- (c) New ditches located in the contaminated soils shall be provided with an impermeable liner that extends 1.0m above the top level of the ditch and is keyed into the adjacent ground.

7.4.2 Reference Concept Drainage

- (a) The Design-Builder may adopt the drainage components incorporated in the Reference Concept. Notwithstanding, the Design-Builder shall follow the requirements stipulated in Section 7.2 [General Design Basis] of this Part and shall develop a SWMM model pursuant to

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Section 7.2(b) of this Part and for the purposes stipulated therein, and shall retain design and construction responsibility as contemplated in Section 1.4 [Province's Design] of this Part.

- (b) The Reference Concept drainage system has been sized to accommodate climate change and it includes, *inter alia*, the following features/components:
- (i) the following two discharge locations at the Fraser River:
 - (A) via the existing Gravel Ridge flood box and pump station; and
 - (B) via the existing flood box at the Silda ditch outfall;
 - (ii) deepening the existing 96th Street (Gravel Ridge) ditch;
 - (iii) extending the existing Highway 17 cross culvert to the 96th Street ditch (refer to L400 on the Reference Concept-Culvert Extension Schematic).
 - (iv) extending in addition to paragraph (iii) above, six further existing culverts/pipes (refer to the Reference Concept-Culvert Extension Schematic);
 - (v) installing a Major Drainage channel connecting the Highway 91 west ditch to the 96th Street ditch, such Major Drainage channel to be piped where it passes through:
 - (A) the Ministry Truck Parking Facility; and
 - (B) the undeveloped property adjacent to the east of the Ministry Truck Parking Facility (8099 Nordel Way);
 - (vi) the drainage channel crossing the Fortis BC gas mains;
 - (vii) a connection from the major drainage channel to the existing Silda ditch shall be provided to facilitate increased runoff from projected climate change and potential future developments, including:
 - (A) a new cross culvert under Highway 91C; and
 - (B) a piped connection through properties 9858 River Road, 9870 River Road, and 9888 River Road north of Highway 91C between the new culvert outlet and the existing Silda ditch; and
 - (viii) an adjustable weir structure is installed within the Highway 91 west ditch to control flows through the adjacent Burns Bog in accordance with specified criteria in the Stormwater Management Plan.

7.5 Work by Others

Several drainage upgrades are currently being considered by Delta through their Development Cost Charges (DCC) Bylaw (Bylaw 7560, 2017) to facilitate future proposed industrial development within the Sunbury industrial area.

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- (a) The DCC drainage upgrades outlined in the Stormwater Management Plan shall be incorporated by the Design-Builder in their assessment for the following development stages:
 - (i) immediately post Substantial Completion; and
 - (ii) through the duration of the drainage infrastructure design life, considering projected climate change and potential future developments that would increase runoff flowing into the Impacted Drainage Area.
- (b) Preliminary pumping capacities for various development stages have been provided in the Stormwater Management Plan for sizing drainage infrastructure in the Impacted Drainage Area.
- (c) The Design-Builder shall confirm the capacity of the existing Gravel Ridge pump station directly with the operator, the City of Delta.
- (d) The Design-Builder shall coordinate with the City of Delta to verify that the Design's drainage infrastructure is compatible with Delta's DCC drainage upgrades and to address any interface requirements.

ARTICLE 8 SIGNING AND PAVEMENT MARKING DESIGN CRITERIA

8.1 Order of Precedence

Signing and pavement marking shall be designed and installed in accordance with the criteria contained in this Article, the requirements of DBSS and the following codes and standards, and if there is any conflict between the criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Highway 91/17 Directional Signing Strategy;
- (c) the DBSS;
- (d) Technical Bulletin TE-2005-05;
- (e) the applicable Ministry Technical Circulars and Technical Bulletins included in the Reference documents;
- (f) Manual of Standard Traffic Signs and Pavement Markings;
- (g) Catalogue of Standard Traffic Signs;
- (h) Specifications for Standard Highway Sign Materials, Fabrication and Supply, and
- (i) Manual of Uniform Traffic Control Devices for Canada.

8.2 Materials

- (a) Sign sheeting for all overhead guide signs shall have a reflectivity level of ASTM Type 9/9. Sheeting for all Shoulder mounted guide signs shall have a reflectivity level of ASTM Type 9/3. The text and graphics used on all guide signs shall be cut from ASTM Type 9 sheeting. Signs shall not be lighted.
- (b) All signs shall be new except with the prior written consent of the Province.
- (c) Standard signs shall be from the Catalogue of Standard Traffic Signs.
- (d) Draft sign records shall be produced by the Design-Builder for acceptance prior to final sign record preparation
- (e) The final sign records to be used for the manufacture of any custom signing shall be provided by the Province.

8.3 Guide Signing

- (a) Guide signing shall be in accordance with the Reference Documents, the Highway 91/17 Directional Signing Strategy, and, where applicable, incorporate existing messaging.
- (b) Sign placement shall consider guide signs and existing/relocated Dynamic Message Signs (“DMS”).
- (c) Regulatory, warning, information, and service and attraction signing shall be consistent in form, format and specifications to that currently existing along Highway 91, 91C and 17 throughout the Project Site. Existing service and attraction signing shall be retained or relocated and/or replaced to suit the New Project Infrastructure.
- (d) All text fonts for guide signs shall be “Clearview Type Fonts”. Text and graphics shall be sized to meet the following standards:
 - (i) urban high volume freeway standards shall apply to Highway 91, Highway 91C and Highway 17 mainlines, ramps and interchanges;
 - (ii) urban conventional highway standards shall apply to all other roads, and
 - (iii) font size shall be as per the table below:

Design Standards	Font/Letter Type	
	Overhead	Shoulder Mount
Message/Design Detail		
Main Destination / Name (i.e. Community Name, Route Name, Cross Street, Major Airport)	400mm (16”) U/L Case	325mm (13”) U/L Case
Font Type - Messaging	ClearviewHwy 5W Series	ClearviewHwy 5W Series
Route Number in Shield	400mm (16”) U/L Case	325mm (13”) U/L Case
Font Type - Route Number in Shield	Helvetica Medium	Helvetica Medium
Cardinal direction	300mm (12”) Upper Case	244mm (9.75”) Upper Case

Design Standards	Font/Letter Type	
Message/Design Detail	Overhead	Shoulder Mount
Exit tab number - "123" or A,B,C etc.	400mm (16")	325mm (14")
Exit tab - "EXIT"	225mm (9") Upper Case	200mm (8") Upper Case
ASTM Retro-Reflectivity	Type 9/9	Type 9/3

Notes:

The above values are based on a sign displaying messages with nine conceptual units (CU) or major words or less.

If the message on the guide sign does not fit on the sign due to restricted sign space, then a narrower series font may be used to condense the message. One line of text, within two or three lines of text messaging may be reduced, but not by more than one font series.

ClearviewHwy font software is available from the developer of the Clearview font type system. For further information on the ClearviewHwy font, please refer to the website: clearviewhwy.com.

- (e) All guide signs shall be erected over the applicable traffic lanes.
- (f) Exit markers with exit numbers shall be used for Highway 91 and Highway 17 as applicable.
- (g) Distance markers shall be installed at 1 km intervals.
- (h) The guide signing shall be designed and installed such that the signing operates in concert with DMS.
- (i) The Design-Builder shall liaise with the Province through the Interim Design submission process to initiate the involvement of the Province's Sign Program.
- (j) The final guide sign messages shall be submitted for acceptance to the Province's Representative, in accordance with the Consent Procedure.

8.4 Regulatory and Other Signing

- (a) Standard regulatory signage, warning, information, and service & attraction signs shall be designed and installed in accordance with the Reference Documents.
- (b) Where minimum highway geometric design standards are proposed as a result of physical constraints, active signage warning systems shall be incorporated. These shall include, but not be limited to, electronic speed reader boards and electronic curve and other warning signs.

8.5 Pavement Markings

- (a) Pavement markings shall meet the requirements of the Manual of Standard Traffic Signs and Pavement Markings and the relevant Ministry Technical Circulars and Technical Bulletins.
- (b) Pavement marking materials shall be listed on the Recognized Products List and be installed when the condition of the road surface is appropriate to the material being applied in accordance with the manufacturer's specifications.
- (c) Inlaid pavement markings are an acceptable alternative to painted markings.
- (d) Under dry conditions the retro-reflectivity of any marking, when measured in accordance with ASTM D6359, shall exceed:

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- (i) 175 millicandela m-2 lux-1 for yellow markings; and
 - (ii) 250 millicandela m-2 lux-1 for white markings.
- (e) Testing shall be done under dry conditions by an independent third party testing agency. The retro-reflectivity shall be measured by a Mirolux 30 retro-reflectometer or equivalent retro-reflectometer.
- (f) Thermoplastic pavement markings shall be utilized for applications such as pavement text, arrows, restricted lane symbols, stop bars, crosswalks, etc. as per typical Ministry practice.

8.5.2 Post Mounted Delineators

The Design-Builder shall supply and install post mounted delineators on open Shoulder sections in accordance with the Manual of Standard Traffic Signs and Pavement Markings. The post mounted delineators shall be equipped with reflectors made from ASTM Type 9 sheeting. Flexible post mounted delineators are an acceptable alternative to rigid post mounted delineators.

8.5.3 Reflectors on Barriers

Reflectors shall be of a type listed on the Recognized Product List and installed at the spacing in the Manual of Standard Traffic Signs and Pavement Markings. Reflectors shall be mounted on top of barriers and reflectors designed only for top mounting shall be used. Spacing for reflectors shall be 12.5 m on median barrier, and 25.0 m on roadside barrier.

8.5.4 Raised Pavement Markings

Raised pavement markings shall be of a type listed on the Recognized Product List and installed at the spacing in the Manual of Standard Traffic Signs and Pavement Markings. Raised pavement markings are to be surface mounted and not placed in a slot in the pavement nor in snow-plowable housings.

8.6 Transit-Only Lanes

The Design-Builder shall be responsible for the design and implementation of signing and pavement marking required to accommodate the existing transit-only lane operations along Nordel Way during Construction. These transit-only lane signing and pavement marking changes shall be completed in accordance with this Article.

ARTICLE 9 LANDSCAPE AND SITE RESTORATION DESIGN CRITERIA

9.1 Order of Precedence

The Design-Builder shall design and implement landscaping and site restoration works in accordance with the criteria contained in this Article, the requirements of DBSS and the following codes and standards, and if there is any conflict between the criteria contained in this Article and any of the Reference Documents, the following shall apply, in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Guidelines for Landscaping and Site Restoration Near Burns Bog;

- (c) the DBSS;
- (d) Manual of Aesthetic Design Practice;
- (e) Landscape Policy and Design Standards; and
- (f) Nursery Stock Standards.

For all areas generally extending south of Highway 17 (west of the Highway 17/Highway 91C intersection), Highway 91C (between Highway 17 and Highway 91), and southeast of the Highway 91/Nordel Way Interchange, the requirements outlined in the Guidelines for Landscaping and Site Restoration Near Burns Bog shall apply. For further certainty, the criteria outlined in this Article shall apply only to areas not covered in the Guidelines for Landscaping and Site Restoration Near Burns Bog.

9.2 General

9.2.1 Landscaping Classification and Objectives

The overall highway aesthetic classification for this Project shall be “Tourway”, as defined in the Manual of Aesthetic Design Practice, with the general landscape design level standard designated as “Suburban”, as described under “Landscape Design Standards” in the Landscape Policy and Design Standards document. The landscape treatments outlined for these categories shall be applied as appropriate to all areas of the Project, with the focus of the landscape Design and Construction directed, but not limited to:

- (a) the landscaping of highway interchanges;
- (b) the revegetation of the back slope of ditch areas;
- (c) plantings between the ditch and the highway right of way line, including the establishment of general ground cover;
- (d) plantings in front of walls for screening purposes;
- (e) the preservation of existing native vegetation;
- (f) revegetation with low maintenance, primarily indigenous tree, grass and shrub species;
- (g) the mitigation of visual impacts of hard structural elements through the use of appropriate planting or aesthetic design treatments;
- (h) lands within the Project Lands and adjacent to lands identified in the ALC Resolution as being available for agriculture, shall meet the following requirements:
 - (i) grading to match adjacent ground levels; and
 - (ii) appropriate drainage.
- (i) lands adjacent to the Project Lands identified in the ALC Resolution as being available for agriculture and which are impacted by Construction, shall meet the following requirements:

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- (i) grading to match adjacent ground levels;
- (ii) appropriate drainage;
- (iii) agriculture capability class 4 or better for organic soils as defined by the Land Capability Classification for Agriculture in British Columbia;
- (iv) clean, debris and stone free, organic top soil to a depth of 0.5m; and
- (v) where applicable, subsoil to a thickness of 0.5m which is clean, debris free, non-stony, medium textured and free draining.

9.2.2 Agricultural Lands

Prior to the start of Construction, the Design-Builder shall retain a Qualified Professional Agrologist to establish the protocols and procedures for the stripping and removal of agriculturally suitable organic and topsoil material as outlined in the Agricultural Impact Assessment Report (Topsoil Management Plan section), including carrying out field tests in order to determine the agricultural suitability of the organic and topsoil material to be stripped within the Property 2 and 3 right-of-way segments (shown in the ALC Resolution), and subsequent monitoring of all soil salvage and placement work. The stripping and removal of organic and topsoil material within the Property 2 and 3 right-of-way segments shall be performed in accordance with such protocols and procedures, as so established.

9.3 Landscaping Requirements

The Design and Construction of the landscaping and site restoration works shall comply with the criteria set out in this Schedule and Schedule 6 [Environmental Obligations].

9.3.1 Conservation of Existing Vegetation

The Design-Builder shall preserve, to the extent possible, native trees and understory plants in areas outside the actual roadwork footprint that do not present traffic safety concerns or affect Infrastructure integrity. Where trees must be removed in areas adjacent to the roadway footprint the Design-Builder shall implement “close cut clearing/no grubbing” practices to retain the existing vegetation roots, to minimize soil disturbance, and to encourage re-growth of the plants.

9.3.2 Integration of “Hard” and “Soft” Landscape Elements

The Design-Builder shall design and construct the landscape and site restoration such that the earthworks, plantings and Infrastructure blend with the conditions of the adjacent terrain, and complement the main roadwork features. The Design-Builder shall address transition points, and provide practical solutions for both good appearance and low maintenance.

9.3.3 Retaining Walls and Hardscape Surfacing

- (a) Where retaining walls and hardscape surfacing, (such as medians, traffic islands and bridge abutment aprons) are required in areas visible from a public roadway the Design-Builder shall incorporate design treatments for these Structures that are aesthetically appealing. Retaining walls shall be screened with vegetation plantings in front of and/or covering the surface of the Structures. Hardscaped areas shall have pleasing surface texturing, patterning, and/or relief

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appropriate for the situation. Design treatments shall follow a consistent theme for the particular section of roadway, and if suitable, for the entire Highway corridor.

- (b) Wire basket type walls or mechanically stabilized earth “green walls” with vegetated facing shall only be used in areas where an appropriate landscape vegetation treatment for screening them can be successfully implemented. Such walls shall require substantial terracing to accommodate soil and support vegetation directly on them and should be installed and maintained as per the manufacturer’s specifications.
- (c) All retaining walls shall have adequate soil provision at the base of the walls for screen planting in front of them.
- (d) This work shall be complementary to, and in accordance with all applicable references in the Table of Commitments.

9.3.4 Landscape and Restoration Planting

- (a) For landscaping purposes, primarily mass planted native trees and shrubs shall be used within all highway right-of-way areas and installed within intersections, medians and other roadside locations. Shrub only planting shall be utilised where tree planting is not suitable.
- (b) Plantings shall be provided along all roadside areas within the Highway, between the back slope of the ditch and the highway right of way property line.
- (c) Plantings shall be designed with plants that improve wildlife habitat diversity, provide windbreaks, and control drainage. Where these plantings may serve other specific screening requirements, plants shall be selected on a best fit basis for the particular purpose.
- (d) The back slope of ditches on the non-highway side, up to the top of the ditch break, shall be revegetated with a combination of seeded grass and woody shrub vegetation. The shrub vegetation shall be established using a hedge-brush layering technique on the back slope.
- (e) Planting at interchanges shall consist primarily of mass planted evergreen conifer trees, supplemented with deciduous trees to provide colour, contrast and diversity. Shrubs and grasses shall be planted at interchanges where trees are not appropriate.
- (f) Visual screen planting shall be provided at the southeast quadrant of the Nordel Way/Highway 91 Interchange, in order to mitigate visual impacts to the Delta Nature Reserve boardwalk.
- (g) Where functional plantings are required to provide screening to augment highway structural components, suitable native plant selections appropriate for the application shall be used.
- (h) Where existing desirable vegetation adjacent to private or municipal property is impacted or removed, it shall be replaced with similar plant material to mitigate the loss.
- (i) Where planting is proposed for environmental reasons such as riparian vegetation restoration/enhancement, habitat compensation, or other such requirement, this work shall take precedence over opportunities for general landscape planting, and shall be carried out in accordance with Schedule 6 [Environmental Obligations] of this Agreement. Where general landscape plantings are in close proximity to environmental revegetation, the Design-Builder

shall design and construct the landscaping to be complementary to and coordinated with the environmental works.

- (j) Remnants of old road surfaces or Structures that are not retained as part of the New Project Infrastructure shall be removed, and the areas occupied suitably prepared and planted and/or seeded, in accordance with this Schedule.

9.3.5 Planting Requirements

- (a) All areas scheduled for planting shall receive plant stock that is appropriately selected and sized for the particular application. Planting areas should take into consideration the limitations to its successful establishment, such as the ability to provide water and existing ground conditions, as well as any specific functional requirements.
- (b) Where the available space between the back of the ditch and the highway right of way line is less than 0.75 m in width, that area shall be treated as part of the back slope revegetation.
- (c) All coniferous trees shall be minimum 1 m to maximum 2 m high container grown stock. All shrub material shall be #2 pot size container stock. Deciduous trees shall be minimum 1.75 m to maximum 2.5 m high container grown stock.
- (d) Where there is sporadic existing desirable vegetation growing in the vicinity of the areas to be planted, it is to be retained and new plant stock shall be installed around it.
- (e) Invasive plants growing in areas where Project Work is being undertaken shall be removed and disposed of according to best practices for disposal of the particular species or invasive plants.
- (f) There may be sections of right of way where existing desirable plants are growing in mass and preclude the installation of new plantings. These areas shall be left as is and planting shall continue beyond these established areas.
- (g) Plant material shall be installed per the DBSS requirements. Some locations may require trenching and removal of existing poor material and replacement with topsoil rather than preparation of individual planting holes. Existing grass and undesirable competing vegetation shall be removed prior to planting.
- (h) The back slope of ditch areas shall be revegetated using a hedge-brush layering technique. This bio-technical technique shall utilize a combination of dormant woody brush cuttings of willow and red stem dogwood along with container grown stock of the same and other suitable plants.
- (i) Terraced, angled ledges (approx. 10 degrees) shall be created at approximately 1/3 and 2/3 of the distance up the back slope. Along these terraces, dormant cuttings shall be placed at a density of 10 cuttings per lineal metre, and protrude about 0.2 m beyond the slope surface. Rooted container stock shall be placed alternately with the cuttings at a density of 1 plant per lineal metre. The trench shall be backfilled with soil and subsequently compacted. Subject to acceptance by the Province under the Consent Procedure, alternative configurations may be used provided all the requirements of this Article are met.

- (j) Planting to screen wire basket and ‘green wall’ type retaining walls shall be carried out using plants most appropriate for the situation, such as drought tolerant shrubs and vines, to provide vegetative screening and surface cover of the walls. Where substantial terracing of the walls is implemented, adequate provision for soil to support the growth of the plants shall be provided.
- (k) A trench of sufficient size to support tree growth shall be provided at the base of the walls and filled with topsoil. Trees shall be planted to screen the walls. These trees may be supplemented by appropriate species of climbing vines on the walls.
- (l) All interchange areas that can accommodate tree planting shall be planted, except where alternative treatments are identified. Trees shall be installed at a minimum planting density of one tree per 10 m², and the quantities and sizes of trees determined from the criteria provided in Table 9.3.5.
- (m) Groupings of trees shall be inter-plantings of the species noted in Table 9.3.5. Subject to acceptance by the Province under the Consent Procedure, alternative species may be used provided all the requirements of this Article are met.

Table 9.3.5 General Interchange Tree Planting Criteria

Plant Material	Size	Plant Quantities
Douglas Fir (<i>Pseudotsuga menziesii</i>)	1.25 m 2.00 m	30% of total 5% of total
Western Red Cedar (<i>Thuja plicata</i>)	1.25 m 2.00 m	20% of total 5% of total
Shore Pine (<i>Pinus Contorta</i>)	1.75 m	20% of total
Big Leaf Maple (<i>Acer macrophyllum</i>)	2.5 m	10% of total
Black Cottonwood (<i>Populus balsamifera ssp trichocarpa</i>)	2.5 m	5% of total
Black Hawthorn (<i>Crataegus douglasii</i>)	1.75 m	5% of total

9.3.6 Revegetation Seeding

- (a) The default treatment for mitigating surface soil erosion shall be the establishment of grass by the hydraulic application of seed with wood fibre mulch, fertilizer, and tackifier onto existing soils.
- (b) All disturbed ground that is to be revegetated but shall not be receiving tree or shrub planting, bark mulch or hard surfacing, shall be promptly re-graded and seeded with grass. Where existing soils are excessively compacted, or otherwise not conducive to supporting a healthy cover of grass, these areas shall be suitably scarified prior to seeding.
- (c) Areas that are highly susceptible to wind or water erosion shall employ erosion control measures adequate to protect the site until grass or other vegetation is established.
- (d) Areas impacted by placement of pre-load or stockpiled materials shall be graded and seeded promptly after removal of the materials.

9.3.7 Landscape Design Submissions

- (a) The Design-Builder shall submit the landscape Design drawings to the Province's Representative as part of the Interim Design and Final Design submissions.
- (b) The landscape Design drawings shall show where the described landscape treatments are proposed to be carried out. The drawings shall also have sufficient detail to convey an understanding of the various landscaping requirements.
- (c) The Construction Records shall include post Construction drawings including, as a minimum, the number, species, and locations of planted trees, shrubs, and plants.

9.3.8 Pedestrian and Cycling Facilities

Landscaping shall be designed to prevent visual obstructions along pedestrian and cycling facilities. Landscaping within 2 m of a path edge shall not exceed 30 cm height.

9.3.9 Landscaping Materials

Notwithstanding the criteria regarding use of "agricultural-grade/-quality" material in the Guidelines for Landscaping and Site Restoration Near Burns Bog, and subject to acceptance by the Province acting reasonably in accordance with the Consent Procedure, landscaping material along permanent fills (e.g. peat, growing medium) may be reclaimed material from the Project Work or locally sourced, provided all the other requirements in this Article are met.

ARTICLE 10 CYCLING AND PEDESTRIAN FACILITIES

10.1 Order of Precedence

The Design-Builder shall design and implement cycling and pedestrian facilities including multi-use paths for cyclists and pedestrians on the Project in accordance with the criteria set out in this Article and the following codes and standards. If there is a conflict between the criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Pedestrian Crossing Control Manual;
- (c) Technical Bulletin TE-2002-07;
- (d) Bicycle Traffic Control Guidelines;
- (e) BC Supplement to TAC;
- (f) TAC Geometric Design Guide;
- (g) TAC Bikeway Traffic Control Guidelines; and
- (h) the applicable documented standards of the Municipality.

10.2 General Requirements

- (a) The following cycling and pedestrian facilities shall be separated from vehicle traffic:
 - (i) sidewalk along east side of the Highway 91C/Weigh Scale Interchange crossing;
and
 - (ii) sidewalk along the River Road Interchange Connecting Road from the east side of the Highway 17 Overpass to the Highway 17 westbound ramp terminal junction.
- (b) Cycling and pedestrian facilities shall not be permitted along any part of the Highway 91 mainline.
- (c) Where the scope of pedestrian and cycling requirements is not specifically defined, the Design-Builder shall, as a minimum, maintain or reinstate existing pedestrian and cycling facilities and maintain continuity along routes.
- (d) Sufficient width shall be provided. Multi-use path clear widths shall not be less than three metres. Multi-use paths shall widen out near the ends of long downhill runs.
- (e) The Design shall consider the speed of cyclists to ensure the safety of all users.
- (f) Expansion joints in Bridges shall be safe for cyclists and as close to 90 degrees as possible, with small gaps, smooth and non-slip in all conditions.
- (g) Grades shall not exceed 5% (unless otherwise dictated by ramp grades, where a maximum of 6% shall be permitted for a short section) and where possible the grade shall not exceed 3%. Rest zones and wider sections to allow passing shall be provided for long uphill grades. For downhill grades that are not dictated by ramp grades, a maximum of 6% shall be permitted for a short section.
- (h) The required clear width shall be maintained at all sections of a path. Paths shall not be interrupted by any obstacles including poles and signs.
- (i) Elevation changes shall be minimized.
- (j) Access for first responders shall be provided to all parts of a path.
- (k) Lighting shall be provided for all paths to meet functional and security requirements.
- (l) CPTED (Crime Prevention Through Environmental Design) principles shall be implemented.
- (m) Multi-use paths shall be designed to avoid the accumulation of surface debris, including gravel, garbage and snow, and shall be free-draining.
- (n) Multi-use paths shall be designed for access by maintenance equipment.
- (o) Multi-use paths shall be provided with a skid resistant surface.
- (p) Sidewalks shall be provided with a concrete surface.

- (q) All multi-use paths shall be surfaced with a minimum 50 mm thick asphalt layer or a minimum 100 mm thick concrete layer, underlain by compacted well-graded crush granular base in not less than 150 mm thickness, underlain by sub-base material as per the design recommendations of the Design-Builder's geotechnical engineer. All granular materials shall be constructed as per Section 202 of the DBSS. All gravel surfaces to be asphalt surfaced shall have an emulsified asphalt primer. If any vehicle use is anticipated, appropriate adjustments to the pavement structure shall be made.

10.3 Design Requirements

10.3.1 Intersections

Provision shall be made for cyclists and pedestrians at signalized intersections and roundabouts. Such provisions shall include but are not limited to, crosswalks, splitter islands, cycling curb cuts, pedestrian/cyclist signal heads and pushbuttons.

10.3.2 Transitions

Transition sections are to be provided to match to existing facilities. Where cyclists approach on-road or no existing facilities exist, it shall be assumed that cyclists operate on both sides of the road in the direction of traffic.

10.3.3 Ramp/Road Crossings

- (a) Multi-use paths shall be direct, safe and convenient. The use of spiral ramps and switchbacks shall be avoided, where possible.
- (b) Where pedestrian and cycling facilities cross ramp terminals that include free right turns from or onto the arterial road, safety elements shall be included to improve driver awareness of crossing pedestrians and cyclists. Such elements shall include, but are not limited to, additional signage, lighting and pavement markings.
- (c) Where a sidewalk or multi-use path crosses a ramp in which the geometric design speed exceeds 40 km/h, the Design shall include a special crosswalk in accordance with the Pedestrian Crossing Control Manual.
- (d) Pedestrian and cycling facilities at roundabouts shall be designed in accordance with Section 5.6.8 of Chapter 5 - Bicycle Integrated Design of the TAC Geometric Design Guide for multilane roundabouts. Such elements shall include, but are not limited to, offer cyclists the opportunity to leave the roadway and join a bike path, multi-use path, or protected bike lane that bypasses the roundabout and meets each leg of the intersection as described in Section 5.6.3.1 and Section 6.6.2

10.3.4 Design Speeds

- (a) Multi-use paths shall be designed to safely accommodate pedestrians and cyclists travelling at the following speeds:
 - (i) Flat grade - 35 kilometres per hour;

- (ii) Down grade - 50 kilometres per hour; and
- (iii) Upgrade - 30 kilometres per hour.
- (b) Cycling facilities that are not integral with a roadway shall maintain a minimum outside radius of 13.0 m. Where reversal of direction (switchback) is required to gain or lose elevation and meet grade requirements, a minimum outside radius of 4.5 m shall be permitted.

10.3.5 Cross Sections

- (a) Table 10.3.5 describes the minimum clear-width requirements for cycling facilities.

Table 10.3.5

TAC Functional Bikeway Classification	Minimum Clear Width
Shoulder Bike Lane (Design Speed* ≤ 50 km/h)	1.5 m ⁽¹⁾
Shoulder Bike Lane (50 km/h < Design Speed* < 80 km/h)	2.0 m ⁽¹⁾
Shoulder Bike Lane (Design Speed* ≥ 80 km/h)	2.5 m ⁽²⁾
Two-way Bikeway (at grade)	3.0 m ⁽³⁾
Multi-use Path	3.0 m ⁽⁴⁾

Notes:

* Design speed of adjacent roadway

- (1) Bike lanes up to 2.0 m in width shall not include the gutter pan in the determination of the cycling facility width.
- (2) The minimum clear width of the BNSF Flyover Bridge structure may be reduced by up to 1.0 m in accordance with Note (6) of Table 1.3.2 of this Part.
- (3) Where two-way bikeways are directly adjacent to the vehicular travel lanes, a minimum delineator separation of 0.3 m shall be provided between the roadway and two-way bikeway.
- (4) Where multi-use paths are directly adjacent to the vehicular travel lanes, a minimum boulevard of 0.3 m shall be provided between the roadway and multi-use path providing the addition of the boulevard does not result in additional structural (including retaining walls) or property impacts.
- (b) Multi-use paths and sidewalks adjacent to the roadway and within the Clear Zone shall be separated from vehicle traffic by barrier, parapet or curbing.
- (c) An additional 0.5 m of clear width is required beyond the widths listed above within pedestrian/cyclist only underpasses/tunnels.
- (d) Pedestrian sidewalks shall have a minimum width of 1.8 m.

10.3.6 Railings and Fencing

- (a) Railings shall be provided in accordance with the BC Supplement to TAC.
- (b) Where Railways are present under a new Bridge, road or other public access adjacent to the railway, a fence shall be provided in accordance with the requirements of the affected Railway owner.
- (c) The Design-Builder shall provide debris fencing on the outside of pedestrian sidewalks situated above roadways on all Bridges. The debris fencing shall extend a minimum of 3.0 m beyond the outside edges of the shoulders of the roadway below. Bicycle fencing shall be

provided along the Bridge beyond these extents up to the abutments. The Design-Builder may adopt the Debris Fence Reference Design located in the Data Room or submit an alternate design. The Design-Builder shall submit signed and sealed drawings for the debris fencing design to the Province's Representative for acceptance under the Consent Procedure.

10.3.7 Cyclist Signage/Pavement Marking

Signage shall provide positive guidance where required and wayfinding over the project area. The following destinations, as a minimum, shall be included in the wayfinding signage:

- (a) River Road;
- (b) Highway 17;
- (c) Nordel Way (between Weigh Station Road and River Road);
- (d) Highway 91C;
- (e) Alex Fraser Bridge; and
- (f) Burns Bog Delta Nature Reserve.

10.4 Specific Requirements

This Section describes the requirements for the Design that shall be provided for cycling and pedestrian facilities in specific areas.

10.4.1 River Road

- (a) A two-way bikeway shall be provided adjacent to the westbound lane of River Road.
- (b) At the intersection of River Road and 96th Street, an at-grade crossing of River Rd shall be provided to ensure continuity for the cycling and pedestrians facilities.

10.4.2 River Road/Highway 17 Interchange

- (a) Full movement cycling connections shall be provided through bicycle accessible shoulders.
- (b) A sidewalk shall be provided along the River Road Interchange Connecting Road from the east end of the Highway 17 Overpass to the River Road ramp terminal junction.

10.4.3 Highway 91C//17 Interchange

Full movement cycling connections shall be provided through bicycle accessible shoulders.

10.4.4 Highway 91C/Weigh Scale Interchange

- (a) Except for along Highway 91C east of the Weigh Scale Interchange, full movement cycling connections shall be provided through bicycle accessible shoulders.

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- (b) A sidewalk shall be provided along the east side of the Highway 91C/Weigh Scale Interchange grade-separated crossing. On Bridges, the sidewalk shall be barrier separated; where not on Bridges, curb and gutter shall be provided.
- (c) The existing multi-use path on the north side of Weigh Station Road shall be interconnected with the new Highway 91C/Weigh Scale Interchange pedestrian and cycling facilities.

10.4.5 Nordel Way/Highway 91 Interchange

An approximate 170 metre length of new boardwalk within the Delta Nature Reserve, situated in the southeast quadrant of the Nordel Way/Highway 91 Interchange, shall be constructed in accordance with the DNR Boardwalk Special Provisions and Drawings. Boardwalk construction shall be scheduled to maintain continued public use of the existing boardwalk until the new boardwalk is completed. Decommissioning and removal of approximately 190 metres of the existing boardwalk shall occur following construction of the new boardwalk.

ARTICLE 11 TRANSIT INFRASTRUCTURE

11.1 Order of Precedence

The Design-Builder shall design and construct transit infrastructure in accordance with the criteria contained in this Article and the following codes and standards, and if there is any conflict between criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) the applicable Ministry Technical Circulars and Ministry Technical Bulletins included in the Reference Documents;
- (c) TransLink Bus Infrastructure Design Guidelines;
- (d) BC Supplement to TAC;
- (e) TAC Geometric Design Guide;

11.2 General Requirements

- (a) The Design-Builder shall consult with TransLink and CMBC during the design of the transit infrastructure and prior to submitting the Design to the Province's Representative pursuant to the Consent Procedure.
- (b) The Design-Builder shall ensure that delays along transit routes are minimized and are coordinated with TransLink and CMBC to prevent adverse impacts on transit operating schedules.
- (c) The Design-Builder shall arrange with TransLink, CMBC and the City of Delta for the relocation of bus stops and associated facilities.

11.3 Geometric Design

- (a) The Design-Builder shall ensure all designs consider bus-specific vehicle characteristics including but not limited to visibility, impairment zones, acceleration/deceleration rates, lane widths, maximum grades and minimum clearances as further described in the TransLink Bus Infrastructure Design Guidelines. Critical vehicle dimensions as outlined in the TransLink Bus Infrastructure Design Guidelines shall be used for the design of all roadways and intersections unless otherwise limited in this Article. The Design vehicle selected shall reflect the “worst case” condition for the types of vehicles, including buses, expected to operate on the specific route.
- (b) The Design-Builder shall conduct bus AutoTURN analysis on all bus-only road infrastructure designs using both standard and articulated buses. Acceptance of bus road infrastructure shall be subject to bus field tests, which shall be the responsibility of the Design-Builder, carried out under the direction of TransLink and CMBC.
- (c) Signage shall be designed and constructed in accordance with the TAC Manual on Uniform Traffic Control Devices in addition to the specific signs developed by TransLink and outlined in the TransLink Bus Infrastructure Design Guidelines.
- (d) Minimum bus clearances from vertical obstructions shall be 0.5 m along straight tangent movements and 1.5 m along bus turning movements.

11.4 Specific Requirements

11.4.1 Nordel Way east of Highway 91

The existing Nordel Way westbound to Highway 91 northbound bus queue jumper lane shall be realigned (as required) to maximize its length.

11.4.2 River Road

A new bus stop/bay shall be provided adjacent to the westbound lane on River Road. The new bus stop/bay shall be located as close as practical to the River Road/Highway 17 westbound ramp terminal junction, unless otherwise specified by CMBC.

ARTICLE 12 INTELLIGENT TRANSPORTATION SYSTEMS (ITS)

12.1 Order of Precedence

The Design for all Intelligent Transportation Systems (ITS) shall be in accordance with the criteria contained in this Article and the following codes and standards, and if there is any conflict between criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Electrical and Traffic Engineering Manual and applicable Technical Bulletins included in the Reference Documents;

- (c) Electrical and Signing Materials Standards; and
- (d) Standard Electrical Equipment Maintenance Manual.

12.2 ITS Equipment

- (a) The intelligent transportation systems equipment to be provided by the Design-Builder in accordance with this Agreement (together, the “**ITS Equipment**”) comprises the equipment specified in this Article for the following systems:
 - (i) ITS Communications Conduit System;
 - (ii) ITS Fibre Optic Cabling;
 - (iii) CCTV system modifications;
 - (iv) Highway 91 ITS system modifications;
- (b) Within 180 days following the Effective Date, the Design-Builder shall submit an ITS implementation plan to the Province’s Representative pursuant to the Consent Procedure. The ITS implementation plan shall be in accordance with the FHWA Systems Engineering Process for Intelligent Transportation Systems.
- (c) The Design-Builder shall be responsible for providing all equipment, materials and cabling necessary to make the systems fully operational.
- (d) Minimal interruption to existing ITS Equipment operation is permitted and all interruptions are to be fully coordinated with the Ministry. For some devices or systems, interruptions will be limited to only off-peak hours. Interruptions will be of a limited duration and the Design-Builder shall provide the Province’s Representative with 6 weeks’ advance notification of proposed interruptions to existing ITS to facilitate coordination and for review and acceptance in accordance with the Consent Procedure.
- (e) Support Structures for the ITS Equipment shall meet the requirements of Article 3 [Structural Design Criteria] of this Part and shall meet the minimum clearance requirements over the roadway in accordance with this Schedule.

12.3 Materials – General Requirements

- (a) All electrical products used in the Project are to be selected from the Recognized Products List. The use of electrical products not on the Recognized Products List requires written acceptance from the Province’s Representative in accordance with the Consent Procedure.
- (b) The Design-Builder shall provide the Province with a list of equipment proposed for disposal prior to removing any ITS equipment. The Province may direct the Design-Builder to return some of the to be removed equipment to the Ministry Electrical Maintenance Contractor Yard. All other removed equipment shall be properly disposed of off-site by the Design-Builder.

12.4 ITS Communications Conduit System

- (a) An ITS communications and power conduit system shall be provided for the full length of the Project along Highway 91, Highway 91C and Highway 17 to accommodate fibre optic cabling and other future ITS needs.
- (b) Conduit system shall consists of 4-50mm RPVC or HDPE communications conduits and a 1-50mm RPVC 120/240V power conduits in addition to any other power conduit system provided for roadway lighting and traffic signals. Provide road crossings of highways every 500m consisting of 2-50mm RPVC or HDPE communications conduits and 1-50mm RPVC 120/240V power conduits.
- (c) Provide 1.5m tel. communication vaults to permit access for pulling fibre optic cabling and for splicing of cables with a maximum of 500m spacing between vaults. Provide junction boxes for the power conduits to permit the pulling of future ITS power wiring. Provide vaults and junction boxes at both ends of all road crossings. Provide a vault on the south side of Nordel Way adjacent to the Truck staging area south of the Nordel Weigh Scale and a vault on the north side of Nordel Way for a future connection to the Nordel Weigh Scale building.

12.5 ITS Fibre Optic Cabling

- (a) A 432C SM fibre optic cable shall be provided in the ITS Communications Conduit System and run the full length of the conduit system on Highway 91, Highway 91C, and Highway 17 within the Project.
- (b) Provide 30m slack in all communications Vaults
- (c) The Design-Builder shall coordinate the Project Work to prevent all interruptions to the Province's existing telecommunications Infrastructure.

12.6 CCTV System Modifications

The Design-Builder shall relocate and make operational the two existing intersection CCTV web cameras on Highway 91C to Nordel Way at Highway 91 SB ramps and to Highway 17 at Highway 91C to provide clear visibility of the highway approaches to the camera.

12.7 Highway 91 ITS Systems

- (a) The following ITS systems are currently in operation on Highway 91:
 - (i) Counterflow system active warning signage;
 - (ii) Vehicle detection systems;
 - (iii) CCTV systems;
 - (iv) ITS control cabinets;
 - (v) Bluetooth detection system; and

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- (vi) Fibre optic cabling systems to support the above ITS systems.
- (b) The Design-Builder shall make necessary modifications to the above systems to maintain the same functionality as currently provided by these systems but with consideration to the geometric changes proposed as part of this Project. Modifications are expected to include but not be limited to relocations, reconfiguration, replacement of power and fibre wiring/cabling, installation of new support poles, and new conduit systems. The location of all ITS devices shall require written acceptance from the Province's Representative in accordance with the Consent Procedure.
- (c) The Design-Builder shall coordinate the Project Work to prevent all interruptions to the operation of the Province's existing ITS Infrastructure.
- (d) Where relocation is required, Bluetooth readers shall be relocated in the vicinity of the original location and the selection of locations and schedule for relocation shall be coordinated with the Province.

ARTICLE 13 ROAD SAFETY AUDIT

13.1 Order of Precedence

The Design-Builder shall conduct Road Safety Audits in accordance with the criteria set out in this Article and the following codes and standards, and if there is any conflict with the criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) Technical Circular T-02/04 and Road Safety Audit Guidelines; and
- (c) the TAC Road Safety Audit Guide.

13.2 Road Safety Audit Team

The Road Safety Audit Team shall consist of a minimum of two auditors. Each team member shall meet the following minimum criteria:

- (a) five years relevant experience in road safety, traffic engineering and geometric design;
- (b) participated in at least five road safety audits; and
- (c) completed at least one road safety audit per year in the last two years.

13.3 Design-Builder's Responsibility

- (a) The Design-Builder shall be responsible for:
 - (i) scheduling, initiating, and managing the Road Safety Audit process at the appropriate times during the course of the Project;

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- (ii) providing all necessary design drawings and supporting documentation for the Road Safety Audit Team to conduct the audits;
 - (iii) ensuring that the Road Safety Audit conducted to a high quality standard;
 - (iv) receiving and reviewing the audit report;
 - (v) responding to the audit report and documenting the response;
 - (vi) conducting any re-design as a result of the Road Safety Audit suggestions;
 - (vii) highlighting any significant changes to the required Design drawings resulting from the Road Safety Audit; and
 - (viii) providing all documentation related to the Road Safety Audit to the Province.
- (b) All costs associated with the Road Safety Audit, including any re-design costs or increased Construction costs that result from the Road Safety Audit, are the responsibility of the Design-Builder.
- (c) After each Road Safety Audit, except as otherwise expressly agreed in writing by the Province, the Design-Builder shall address all recommendations made by the Road Safety Audit Team.

13.4 Road Safety Audit Process

13.4.1 General Requirements

- (a) The Road Safety Audit process shall be carried out in accordance with the TAC Road Safety Audit Guide, the Road Safety Audit Guidelines and in accordance with Part 3 [Design and Certification Procedure] of this Schedule.
- (b) The Road Safety Audit Team shall prepare an audit report to document the audit findings. Road Safety Audit reports shall be submitted to the Design-Builder's Design Team for the stages identified below.
- (c) The Road Safety Audit reports shall clearly identify safety hazards that need to be addressed by the Design-Builder along with recommendations for remediation. The Design-Builder shall respond to the identified hazards and recommendations with remediation countermeasures.
- (d) Road Safety Audits reports shall be provided to the Province for review, in accordance with the Review Procedure, at three stages, as identified below.

13.4.2 Stage 1: Interim Design Road Safety Audit

A Stage 1 Road Safety Audit shall be conducted immediately before submission of the Interim Design in accordance with Part 3 [Design and Certification Procedure] of this Schedule. This Road Safety Audit shall undertake a detailed review of the Interim Design drawings to identify any potential safety-related enhancements that might have an impact on the New Project Infrastructure. Issues considered shall include:

- (a) Design consistency;

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- (b) horizontal and vertical alignment;
- (c) cross section Design;
- (d) interchange/intersection configuration;
- (e) access locations;
- (f) stopping sight distance and turning sight distance;
- (g) operation of public transport;
- (h) maintenance safety;
- (i) clearances to roadside objects;
- (j) safety barriers; and
- (k) provision for vulnerable road users.

13.4.3 Stage 2: Final Design Road Safety Audit

A Stage 2 Road Safety Audit shall be conducted at Final Design in accordance with Part 3 [Design and Certification Procedure] of this Schedule. The audit shall undertake a detailed review of the Final Design drawings to identify any potential safety-related enhancements that might have an impact on the operational safety of the New Project Infrastructure. Issues considered shall include:

- (a) signing and pavement markings;
- (b) traffic signal configuration;
- (c) interchange and intersection details;
- (d) drainage;
- (e) lighting;
- (f) fencing;
- (g) clearances to roadside objects;
- (h) safety barriers;
- (i) surface standards;
- (j) landscaping;
- (k) provision for vulnerable road users;
- (l) accommodation of design vehicles; and

- (m) any Stage 1 items affected by the Final Design.

13.4.4 Stage 3: Post Construction Road Safety Audit

- (a) Prior to opening for traffic operation, a Stage 3 Road Safety Audit shall be carried out to identify potential safety enhancements that may reduce the frequency of collisions.
- (b) Stage 3 Road Safety Audits shall take place prior to and as a condition of the issuance of the Certificate of Substantial Completion.
- (c) In the event any Construction activities are taking place with “live” traffic, a series of staged Road Safety Audits shall be carried out as each stage of the relevant Construction activities is completed and before a Construction Certificate is issued in accordance with Part 3 and Part 4 of this Schedule.
- (d) For the purposes of completing a Stage 3 Road Safety Audit required pursuant to paragraphs (a) and (b) above, the Road Safety Audit Team shall fully examine the New Project Infrastructure, including:
 - (i) meeting with the Project team to review any Construction activity related issues, in particular Design changes that may affect the safety of the New Project Infrastructure;
 - (ii) checking to ensure that safety issues identified in the Design audits are addressed and the resulting Design changes do not create a further safety problem;
 - (iii) reviewing any Design changes that occurred during the relevant Construction activity to ensure they do not create a safety problem; and
 - (iv) conducting a field review of the New Project Infrastructure, under both daytime and nighttime conditions, to observe the operation of the New Project Infrastructure from the perspective of the road user.

13.5 Temporary Traffic Control (Design) Road Safety Audit

- (a) For each phase of Construction activity, Road Safety Audits shall be conducted during Design for temporary traffic control set-ups that meet any of the following criteria:
 - (i) the duration of a temporary traffic control set-up or lane shift that is two weeks or longer. The set-up does not necessarily have to be in place for the entire time but can be one of a number of repeating set-ups that are active at different times; and
 - (ii) a temporary traffic control set up whose complexity exceeds that of the standard templates used in the Traffic Management Manual.
- (b) Each such Road Safety Audit shall be completed prior to the implementation of the temporary traffic control set-up unless otherwise agreed to by the Province’s Representative.

13.6 Temporary Traffic Control (On-site) Road Safety Audit

- (a) For each phase of Construction activity, Road Safety Audits shall be conducted on the Project Site, following implementation, for temporary traffic control set-ups that meet any of the following criteria:
 - (i) two or more individual temporary traffic control set-ups in close proximity to each other such that one would influence the traffic operation of the other. The spacing between the termination area of one work zone and the advance warning area of the next work zone for which one temporary traffic control set-up influences the traffic operations of the next temporary traffic control set-up is 2 km or less;
 - (ii) the duration of a temporary traffic control set-up or lane shift that is two weeks or longer. The set-up does not necessarily have to be in place for the entire time but can be one of a number of repeating set-ups that are active at different times; or
 - (iii) a temporary traffic control set-up whose complexity exceeds that of the standard templates used in the Traffic Control Manual.
- (b) Each such Road Safety Audit shall be completed within two days after implementation unless otherwise agreed to by the Province.
- (c) The Road Safety Audit Team shall follow a check list based on the ITE Temporary Traffic Control Guidelines. The Road Safety Audit shall include a review of both daytime and nighttime temporary traffic control set-up and where applicable the accommodation of vulnerable road users.

13.7 Certificates

After each of the three stages of the Road Safety Audit process and where required for temporary traffic control in accordance with Section 13.5 of this Part, the Design-Builder shall submit to the Province's Representative a Road Safety Audit Certificate.

ARTICLE 14 DEMOLITION, REMOVALS AND DISPOSAL

14.1 Demolition

- (a) The demolition, disassembly and removal of Infrastructure and other buildings, improvements and amenities from the Project Site shall satisfy all Environmental Laws and requirements of Governmental Authorities and Utility Suppliers.
- (b) The Design-Builder shall prepare and submit demolition plans to the Province's Representative in accordance with the Consent Procedure for any demolition, disassembly and removal of Infrastructure and other buildings, improvements and amenities from the Project Site, a minimum of 90 days in advance of the commencement of the implementation of such plan.
- (c) Following the acceptance of any such demolition plan by the Province in accordance with the Consent Procedure, the Design-Builder shall submit all subsequent changes to such demolition plan to the Province's Representative pursuant to the Review Procedure.

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- (d) The Design-Builder shall complete the demolition in accordance with this Article before the Design-Builder submits a request for a Certificate of Total Completion pursuant to Part 3 of this Schedule.
- (e) Demolition shall include backfilling abutment excavations, grading and landscaping of demolition sites upon completion of the demolition work.
- (f) The Design-Builder shall demolish structures to a minimum depth of 1.0 m below the finished grade.
- (g) Portions of roadway that are not retained as part of the New Project Infrastructure shall be removed and restored in accordance with this Article and Article 9 [Landscape and Site Restoration Design Criteria] of this Part.

14.2 Waste Removal

- (a) All waste/debris arising from the Works and all material brought to site but not incorporated into the Works shall be removed from the Project Site by the Design-Builder prior to Substantial Completion.
- (b) The Design-Builder shall dispose of all contaminated, hazardous or dangerous material, in accordance with the regulations of relevant Governmental Authorities.
- (c) Disposal at sea, as defined in Environmental Laws, is not anticipated. If the Design-Builder elects to consider disposal at sea, it is the Design-Builder's responsibility to liaise with the Regional Ocean Disposal Advisory Committee and acquire the necessary permit from Environment Canada in accordance with applicable regulatory requirements.

14.3 Removal of Existing Electrical Equipment

The Design-Builder shall remove from the Project Site and dispose of all existing electrical equipment, including underground boxes, foundations and wiring, not incorporated into the New Project Infrastructure.

14.4 Removal of Existing Utilities

- (a) The Design-Builder shall remove from the Project Site or decommission any abandoned pipe exceeding 600 mm in diameter situated beneath permanent Travelled Lanes. Decommissioning shall be achieved by completely filling the void in the pipe with a controlled density fill and sealing both ends. Controlled density fill shall be designed to have a minimum unconfined compressive strength of 1 MPa at 28 days and be designed to minimize shrinkage. All mix designs shall be signed and sealed by the responsible engineer, who shall be a duly experienced Professional Engineer of an appropriate discipline.
- (b) The Design-Builder shall remove and dispose of all abandoned exposed Utilities.

ARTICLE 15 CLIMATE CHANGE ADAPTATION

15.1 General Requirements

The Design-Builder shall comply with Technical Circular T-06/15.

15.2 Climate Data

The Design-Builder shall determine the appropriate climate data to be used in the Design to account for anticipated climate change. The climate data used shall:

- (a) be data from southwest coastal British Columbia or derived for the Lower Mainland;
- (b) consider at a minimum, temperature, rain, sea level, snow, ice, fog, hail, frost, humidity, ice accretion, wind, floods, extreme temperatures and precipitation, and storms of various intensities; and
- (c) rely on climatological modelling analysis that is consistent with current climate science and relevant to the Lower Mainland.

15.3 Climate Vulnerability Risk Assessment & Analysis

The Design-Builder shall produce a climate change risk assessment report which assesses climate change vulnerability. The vulnerability risk assessment shall:

- (a) comply with minimum levels of effort as per EGBC Climate Change – Resilient Design, section 3.0;
- (b) consider and accommodate at minimum, climate/design parameters related to extreme weather events involving such things as temperature, rain, sea level, Fraser River level (per the Fraser River Flood Mapping by NHC for the Fraser River Basin Council), snow, ice, fog, hail, frost, humidity, ice accretion, wind, floods, extreme temperatures and precipitation, storms of various intensities, and combinations of these factors;
- (c) produce a climate change risk assessment matrix including key infrastructure, as well as any at-risk infrastructure;
- (d) assess potential impacts to Project Infrastructure components from climate change, identify a proposed action where an impact is determined to be present and provide a new associated risk rating; and
- (e) assess how these vulnerability risks are anticipated to change over the Design Life of each component of the Project Infrastructure.

15.4 Climate Change Adaptation Report

Within 90 days following the Effective Date, the Design-Builder shall prepare and submit to the Province's Representative, in accordance with the Review Procedure, a preliminary climate change adaptation report demonstrating the assessment completed and how the requirements of Technical Circular T-06/15 and this Article will be met in the Final Design.

ARTICLE 16 DIKE PROTECTION, RESTORATION AND ENHANCEMENT CRITERIA

16.1 Order of Precedence

The Design-Builder shall implement Dike protection, restoration and enhancement in accordance with the criteria set out in this Article and the following codes and standards, and if there is any conflict with the criteria contained in this Article and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Article;
- (b) *Dike Maintenance Act* (British Columbia);
- (c) requirements and guidelines set by the Inspector of Dikes, as that term is defined in the *Dike Maintenance Act* (British Columbia);
- (d) the applicable documented standards of the City of Delta; and
- (e) Seismic Design Guidelines for Dikes.

16.2 General Requirements

- (a) At all times, the Design-Builder shall comply with the requirements of the *Dike Maintenance Act* (British Columbia).
- (b) The Design-Builder shall coordinate with the City of Delta and Relevant Authorities to ensure flood protection operations are not impacted.
- (c) The Design-Builder shall not negatively disturb, impact, or influence any ground or excavate or remove any material of the existing Dikes or ground area of the existing Dikes.
- (d) In the event of an incident resulting in non-compliance with Section 16.2 (c) of this Article whereby the Design-Builder negatively disturbs, impacts, or influences the existing Dikes and/or the ground area of the existing Dikes, the Design-Builder shall:
 - (i) restore and enhance the Dikes and affected areas to comply with current standards;
 - (ii) consult with the City of Delta regarding any proposed Dike restoration and enhancement; and
 - (iii) obtain written approval from the Deputy Inspector of Dikes regarding any proposed Dike restoration and enhancement.
- (e) The Design-Builder shall develop, implement, maintain and update a plan (the “**Dike Protection Plan**”) which includes, as a minimum the following:
 - (i) demonstrates compliance with this Article;
 - (ii) identifies Construction in the vicinity of the Dike and provides a work plan including specific measures to address and meet the requirements of this Article;

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- (iii) maintaining access for operation and maintenance by the City of Delta; and
 - (iv) emergency response plan in the event of an incident.
- (f) The Design-Builder shall consult with the City of Delta in the development of and updates to the Dike Protection Plan.
- (g) The Design-Builder shall, within 120 days following the Effective Date and, in any event, no later than 20 days in advance of construction in the vicinity of the Dike, submit the Dike Protection Plan, to the Province's Representative in accordance with the Review Procedure. Any subsequent amendments or updates to the Dike Protection Plan shall be submitted to the Province in accordance with the Review Procedure.
- (h) The Design-Builder's Design shall consider the seismic performance of any modified Dikes in accordance with the Reference Documents listed in this Article. The Design-Builder's incremental cost to design the seismic enhancements for any modified Dikes shall constitute a Province Change. Subject to the Province's determination and direction, construction of the modified Dike seismic enhancements shall be performed by the Design-Builder under the Province Change process.

**PART 3
DESIGN AND CERTIFICATION PROCEDURE**

ARTICLE 1 DESIGN MANAGEMENT PLAN AND TECHNICAL APPRAISAL FORMS

1.1 Submission of Design Management Plan

Within 30 days following the Effective Date, the Design-Builder shall submit a Design Management Plan to the Province's Representative in accordance with the Consent Procedure. The Design Management Plan shall include:

- (a) the organization chart for all design activities;
- (b) the procedures to be used for designing and checking each of the designs and the form of review to be undertaken by the Design-Builder;
- (c) the identification of the Checking Team for Structures;
- (d) the contents and format of Interim Design and Final Design submissions;
- (e) processes and schedule for design checking, internal reviews and audits;
- (f) a design submission and review schedule, indicating dates that the Design-Builder plans to:
 - (i) submit Interim Designs;
 - (ii) undertake review meetings in accordance with Section 1.3 [Review Meetings] of this Part; and
 - (iii) submit Final Designs;
- (g) the process and schedule for Road Safety Audits;
- (h) the process for Designer reviews during construction;
- (i) an overview of document management and controls;
- (j) the drawings standards used by the Design-Builder;
- (k) a drawing tree indicating the organization and hierarchy of the Design-Builder's drawings; and
- (l) appropriate metrics to measure the progress of the Design for each discipline.

Any subsequent amendments or updates to the Design Management Plan shall be submitted by the Design-Builder to the Province's Representative in accordance with the Review Procedure.

1.2 Compliance with Design Management Plan

The Design-Builder shall implement and comply with the Design Management Plan which has been accepted by the Province's Representative in accordance with the Consent Procedure, and any subsequent

amendments or updates to the Design Management Plan to which there is no objection by the Province in accordance with the Review Procedure, in connection with all Design Data prepared or adopted in connection with the Design and the Construction.

1.3 Review Meetings

- (a) The Design-Builder shall organize review meetings with the Province for the purpose of reviewing the Design information in accordance with the Design Management Plan.
- (b) Discussion between the Province and Design-Builder at the review meetings shall be informal and shall not be considered for the purposes of this Agreement as either Province Changes or Design-Builder Proposals.

1.4 TAF Submission Requirements

- (a) Each Final Design and Construction activity submission package submitted by the Design-Builder in accordance with this Part shall be accompanied by a completed TAF.
- (b) In any case where submitted Design Data involves any mechanical or electrical and/or intelligent transportation system functions, or similar specialization, the Design-Builder shall submit to the Province's Representative in accordance with the Review Procedure a TAF in respect of such data and functions.
- (c) In any case where the Project Work involves the complete or partial demolition of an existing Structure, the Design-Builder shall submit to the Province's Representative in accordance with the Review Procedure a TAF in respect of such complete or partial demolition.

1.5 TAF Form and Content

Each TAF submitted by the Design-Builder pursuant to Section 1.4 [TAF Submission Requirements] of this Part shall be in the format shown in Appendix D [Sample Contents for a Structural TAF] to this Schedule and shall:

- (a) for Final Design submissions, 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 accompanying the Design Certificate;
- (b) for Construction submissions, provide the relevant Construction Certificate for such Construction; and
- (c) be signed by:
 - (i) the Design-Builder's Representative; and
 - (ii) the Designer(s), or its principal(s), as necessary.

1.6 TAF Variation

Any variation to a TAF which has been subject to the Review Procedure during Design, assessment or any Construction shall be submitted in accordance with the Review Procedure as an addendum to the TAF.

ARTICLE 2 DESIGN SUBMISSIONS, REVIEW AND REPORTS

2.1 Design and Certification Procedure

- (a) The Design-Builder shall implement and enforce the procedure set out in this Part (the “**Design and Certification Procedure**”), together with the accepted Design Management Plan, throughout the Term.
- (b) The Design and Certification Procedure shall apply to all Design Data prepared or adopted in connection with the Construction, including any further design development or changes to a design once a TAF has been subjected to the Review Procedure.
- (c) The Design-Builder shall ensure that all certification procedures referred to in the Design Management Plan and the Design and Certification Procedure are complied with by the appropriate persons referred to therein, including the Design Team, the Designer and any independent team or engineer within the Designer, 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 fulfil the obligations required of them under the Design Management Plan or the Design and Certification Procedure shall be a breach of the Design-Builder’s obligations under this Agreement.

2.2 Design and Certification Procedure in Emergency

In the case of an emergency, the Design-Builder may proceed with such measures as are immediately necessary for the protection of persons and/or property prior to complying with the applicable provisions of this Design and Certification Procedure, provided that the Design-Builder shall comply with the provisions of this Design and Certification Procedure otherwise applicable to those measures as soon as reasonably possible under the circumstances.

2.3 No Limitation

A requirement for certification or for any check or review pursuant to, and for purposes of, this Part is in addition to, and does not in any way limit, qualify, replace or relieve the Design-Builder from, the obligation to comply with any other certification, check or review requirement provided elsewhere in this Agreement or any of the Project Requirements, or pursuant to any applicable professional standards or practices.

2.4 Format of Design Submissions

- (a) The Design-Builder shall provide two hard copies (one set 11x17 and one set full size), one PDF file and one AutoCAD data file for each Interim Design and Final Design submission.
- (b) Drawings shall be in a format in accordance with the requirements of the Ministry Standards. The Design-Builder shall confirm drawing conventions and standards, including AutoCAD standards, title block and stationing convention, with the Province’s Representative prior to commencing design drawing production.
- (c) Drawings for the New Project Infrastructure to be constructed by the Design-Builder that shall, in accordance with the Ministry Jurisdictional Atlas, be within municipal jurisdiction, shall be in accordance with the applicable standards of the Municipality.

2.5 Preparation of Design Data

All Design Data shall be prepared under the supervision of the Designer. Prior to the submission of any Design Data to the Province's Representative, the Designer and the Checking Team where applicable, shall satisfy themselves that the Design Data meets all Project Requirements and otherwise complies with the requirements of this Agreement.

2.6 Interim Design Review

- (a) The Design-Builder shall submit to the Province's Representative Interim Designs, including supporting information, for, at a minimum, the Project Infrastructure and geotechnical Design. The supporting information shall include the traffic engineering analysis and reporting in accordance with Article 1 [Laning and Geometrics Design Criteria] of Part 2 of this Schedule.
- (b) Interim Design submissions shall be informal and shall not be reviewed according to the Review Procedure. Rather, such informal Interim Design submissions shall be used to inform the Province on the development of the Design and provide an opportunity for a dialog on compliance with the Project Requirements before the Design is complete.
- (c) The content of such Interim Design submissions shall be appropriate to the subject and discipline and include any specific requirements for such submissions set out in this Agreement. The information provided shall be adequate to show that the Design is proceeding in compliance with the Project Requirements and is taking into consideration the relevant Construction.
- (d) In accordance with this Design and Certification Procedure, the Design-Builder and the Province shall agree on the design information to be submitted for review in the Interim Design submissions, the schedule of such Interim Design submissions, and the scope of each review.

2.7 Final Design Review

Final Designs from all design disciplines shall be submitted to the Province's Representative in accordance with the Review Procedure, including the relevant TAF(s) together with all Final Design drawings, Design Certificates, supporting Design Data and calculations required in accordance with this Schedule.

2.8 Final Design Submissions

2.8.1 General

- (a) Design folders shall be prepared for the Final Design submissions 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 design calculations and backup information. Design folders shall include, without limitation, copies of all approvals, design reports, correspondence, internal design reviews, quality control records and calculations.
- (b) The Final Design submissions shall address any comments by the Province from the Interim Design Review.

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- (c) Final Design drawings and reports shall be signed and sealed by the responsible engineer or qualified professional, who shall be a duly experienced Professional Engineer or qualified professional of an appropriate discipline.

2.8.2 Roadway and Drainage Design

The Final Design submission shall, without limitation:

- (a) contain all design drawings, including complete laning and geometrics, profiles, typical and template cross-sections, right of way acquisitions and drainage;
- (b) include the stormwater management plan, drainage design report, and SWMM model pursuant to Section 7.2(b) of Part 2 of this Schedule; and
- (c) include revisions to address stakeholder issues, plans for Utility relocations, critical constructability and traffic handling considerations, environmental issues and mitigation plans.

2.8.3 Bridge Design

The Final Design submission shall contain, without limitation, the following:

- (a) all design drawings, including for general arrangements, Foundations, Substructures, Superstructures, auxiliary components, Utilities on the Bridges, drainage, inspection and maintenance accesses, barriers and all related information;
- (b) a geotechnical report for each of the Structures;
- (c) a final Seismic Design Strategy Memorandum for the applicable Structures, which shall be submitted to the Province's Representative at the Interim Design review and be updated and resubmitted with the Final Design submission;
- (d) a spreadsheet (hard copy and electronic) containing the structure parameters data in accordance with Article 3 [Structural Design Criteria] of Part 2 of this Schedule;
- (e) seismic performance drawings in accordance with the Seismic Performance Drawings Template located in the Data Room;
- (f) a neat, bound, indexed set of design calculations for the Bridge Structures initialled by the responsible engineer, who shall be a duly experienced Professional Engineer of the appropriate discipline; and
- (g) a plan for the settlement monitoring of Structures.

2.8.4 Other Structures Design

The Final Design submission shall contain, without limitation, the following:

- (a) final geotechnical report for each of the Structures;

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- (b) descriptions of aesthetic treatment for all walls;
- (c) descriptions of maintenance considerations for all Structures;
- (d) global stability reports, if applicable; and
- (e) a neat, bound, indexed set of design calculations for the Structures, initialled by the responsible engineer, who shall be a duly experienced Professional Engineer of the appropriate discipline.

2.8.5 Geotechnical Design

- (a) For the Final Design submission the Design-Builder shall prepare a comprehensive geotechnical report for the Project that covers existing geotechnical information and known site conditions, new investigations performed for the Project, geotechnical engineering analysis, geotechnical design assumptions and design parameters (and the basis for these) and geotechnical design recommendations. The report shall be submitted to the Province's Representative at the Interim Design review and updated and resubmitted with the Final Design
- (b) In addition, the Final Design submission shall, without limitation, contain:
 - (i) a summary of any additional work and subsurface investigations that have been completed since the Interim Design, including drafted drill summary logs in Ministry format;
 - (ii) final recommendations for foundation systems, allowable loads and estimates of total and differential settlements at 2 and 25 years following construction;
 - (iii) material and construction specifications for deep foundation elements including testing requirements and acceptance criteria;
 - (iv) geotechnical design recommendations for retaining structures;
 - (v) light weight fill designs and geotechnical design recommendations for pavements;
 - (vi) estimates of total and differential settlement of embankments and roadways at 2 and 25 years following construction;
 - (vii) liquefaction assessments, ground displacement estimates, and soil structure interaction analysis of Bridge foundations demonstrating that design meets Performance Based Design requirements of the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14;
 - (viii) requirements for ground improvement measures necessary to meet the static and seismic performance requirements for foundations, cut and fill slopes, embankments and retaining structures;
 - (ix) an assessment of the stability of approach embankments, road embankments, cut slopes and fill slopes under static and seismic loading conditions and the ability of these to meet the seismic performance requirements;

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- (x) drawings showing the road alignment in plan and profile with drill hole locations shown on the plan and simplified summary logs shown on the profile (design notes are to be shown along the bottom of the drawings); and
- (xi) a final geotechnical report for the Structures with drawings showing the general arrangements for the Bridge Structures in plan and profile, with drill locations shown in plan and simplified summary logs shown in profile.

2.8.6 Electrical, Signing and Pavement Markings Design

- (a) The Final Design submissions shall include electrical (including signals, lighting and telecommunications), signing and Pavement Marking plans.
- (b) Design drawings for all electrical systems shall contain, without limitation, the following:
 - (i) electrical equipment and all associated support structure locations;
 - (ii) lighting calculations where appropriate;
 - (iii) traffic signal site plans, elevations, signal phasing diagrams, and details;
 - (iv) service locations; and
 - (v) schematics showing electrical wiring layout.
- (c) Sign design sheets shall be submitted for all custom guide signs. Sign design sheets shall be produced using Transoft Guide sign (or equivalent) software.
- (d) All cantilever and sign bridge Structures submissions shall be undertaken in accordance with Section 300 of the Electrical and Signing Materials Standards.

2.8.7 ITS Equipment

The Final Design submission shall contain, without limitation, design drawings for the ITS Equipment containing, without limitation, the following:

- (a) equipment and all associated cabinet locations;
- (b) equipment support structure locations;
- (c) service locations;
- (d) vehicle detection coverage plans;
- (e) schematics showing communications and electrical wiring layout;
- (f) wiring diagrams;
- (g) fibre optic splice details and riser diagrams; and

- (h) communications conduit plans (on electrical plans) and riser diagrams.

2.8.8 Landscaping and Site Restoration

The Final Design submission shall contain a detailed landscape plan and drawings that reflect any highway design changes and incorporate comments made on the interim submissions. The Design-Builder shall document changes and describe the design work that has been completed since the Interim Design submission. Drawings shall be of a suitable scale for legibility, and shall provide enlarged detailing where needed.

2.8.9 Traffic Modelling and Traffic Engineering

The Final Design submission shall contain, without limitation, the following:

- (a) traffic engineering analysis, micro-simulation models and associated reports and files in accordance with Part 2 of this Schedule;
- (b) traffic engineering checklists and signal timing sheets associated with the design of signalized intersections;
- (c) the assigned traffic volumes, along with the traffic engineering checklists and signal timing sheets for opening day operation of signalized intersections; and
- (d) traffic engineering analysis along with the traffic engineering checklists and signal timing sheets whenever traffic signal timings are adjusted after opening day.

2.8.10 Environmental Design

The Final Design submission shall contain, without limitation, the following:

- (a) applicable construction drawings that include:
 - (i) all critical and sensitive wildlife habitats and ecosystems (e.g. nest trees, red and blue listed plant communities, wetlands, etc.);
 - (ii) “no disturbance” riparian and “vegetation to remain” (protected vegetation) areas;
 - (iii) all fish bearing streams and aquatic habitats; and
 - (iv) all archaeological features;
- (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:

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- (i) regulatory agency review and acceptance documentation for the Environmental Management Plan specific to the work designed;
 - (ii) all licenses, notifications, permits, authorisations and approvals specific to the work designed; and
 - (iii) all assessments, studies, surveys and monitoring reports specific to the work designed; and
- (e) an environmental design criteria checklist for each environmental design package (a), (b), (c) that demonstrates consideration of and compliance with the environmental requirements and commitments applicable to the particular design package.

2.8.11 Settlement Monitoring

No less than 60 days prior to the commencement of any Construction, the Design-Builder shall prepare and submit a Settlement Monitoring Plan to the Province's Representative in accordance with the Consent Procedure. The Settlement Monitoring Plan shall demonstrate compliance with the settlement criteria outlined in the provisions of Part 2 [Design and Construction] of this Schedule. The Settlement Monitoring Plan shall include but not be limited to:

- (a) the types of monitoring to be used and locations of planned monitoring points to establish baselines and adequately measure actual settlement;
- (b) the procedures to be used for monitoring settlement during construction;
- (c) the procedures to be used for monitoring settlement for the duration from completion of construction of the individual components, to the expiration of the General Project Work Defect Warranty Period; and
- (d) procedures and measures to bring non-compliant work into full compliance with the settlement requirements.

The Design-Builder shall implement and comply with the Settlement Monitoring Plan which has been accepted by the Province's Representative under the Consent Procedure.

2.9 Road Safety Audit Design Data

All Design Data shall be subject to Road Safety Audits in accordance with Article 13 [Road Safety Audits] of Part 2 of this Schedule as and where required pursuant to the provisions of the Design Management Plan, the Project Requirements and any other provision of this Agreement.

2.10 Objection to Design Data

If the Province objects to any Design Data in accordance with the Review Procedure, the Province shall so notify the Design-Builder and the Design-Builder shall, unless the Design-Builder disputes the objection by the Province to such Design Data in accordance with the Dispute Resolution Procedure, either:

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- (a) cause to be made such alterations and additions as may be necessary such that the Design Data accords with the Project Requirements and all other requirements of this Agreement, all in accordance with the Review Procedure; or
- (b) subject to the other provisions of this Agreement, submit a Design-Builder Proposal.

2.11 Adherence to Design Data

Design Data which has been the subject of a Certificate that has been submitted to the Province's Representative in accordance with the Design Management Plan, the Design and Certification Procedure or this Agreement shall not be departed from otherwise than in accordance with Schedule 11 [Changes] of this Agreement.

2.12 Issued for Construction Drawings

The Design-Builder shall submit copies of all drawings that are "issued for construction", together with manuals, instructions to the Design-Builder and other relevant information as requested by the Province, to the Province's Representative and to the Owner's Engineer.

2.13 No Construction

The Design-Builder shall not commence or permit the commencement of the Construction (including any Temporary Works) unless and until all Design Data and relevant Certificates required in respect of the relevant part of the Design and Construction have been submitted by the Design-Builder to the Province's Representative for consideration in accordance with the Design Management Plan and the Design and Certification Procedure.

2.14 Designer Review during Construction

During Construction, the Design-Builder shall ensure that the Designer, in accordance with the procedures set out in the Design Management Plan and the relevant Quality Documentation and other Project Requirements, examines the same and satisfies itself that such Project Work and every part thereof have been designed, constructed, completed, commissioned, tested and maintained in all respects so as to accord with:

- (a) Design Data in respect of which Design Certificates have been issued and to which there has been no objection in accordance with the Review Procedure; and
- (b) all applicable Project Requirements, and otherwise to comply in all respects with the requirements of this Agreement.

2.15 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, including TAFs, for these Temporary Works shall be submitted to the Province's Representative in accordance with the Review Procedure.
- (b) Design Data relating to any Temporary Works shall be checked by a Checking Team independent of the designer.

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- (c) In performing the check referred to in paragraph (b) above, the Checking Team shall satisfy itself that:
 - (i) the Design Data meets the Project Requirements and otherwise complies with the requirements of this Agreement;
 - (ii) the Temporary Works (as a whole and the constituent parts) are satisfactory for the safe and proper discharge of the Design-Builder'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 Project Infrastructure.
- (d) Where any Temporary Works may endanger public safety on any highway or other road or area used by or accessible to the public other than the New Project Infrastructure, the Design-Builder shall consult the relevant highway Governmental Authority and the Design Data shall reflect the requirements of such Governmental Authority.

2.16 Documentation for Ministry Jurisdictional Atlas

The Design-Builder shall prepare drawings for the Ministry Jurisdictional Atlas for the purposes of defining the boundaries between Provincial and Municipal infrastructure and infrastructure to be operated and maintained by the SFPR Concessionaire pursuant to the SFPR Concession Agreement (each as defined in Schedule 18 [Interface Requirements]). The Design-Builder shall consult with the Province prior to preparing the drawings. The drawings shall be submitted to the Province's Representative in accordance with the Review Procedure no later than 60 days prior to the Substantial Completion Date.

ARTICLE 3 CHECKING OF STRUCTURES

3.1 Independent Review

All Structures shall have, as part of the Interim Design submission, an independent review in accordance with Bylaw 14(b) [Quality Management] of the EGBC Bylaws (as they may be amended from time to time) and the EGBC Independent Review Guidelines (as they may be amended from time to time), and a copy of the documentation shall be included in the Interim Design and Final Design submissions.

3.2 Categories of Structures

The "Category" of a Structure shall determine the degree of independence of checking of Design Data required for that Structure. Every Structure shall be placed in one of four Categories:

- (a) Category 0. Minor individual Structures provided they conform to one of the following:
 - (i) a Structure with a single span of less than 10m and which is statically determinate;
 - (ii) a buried Structure less than 3m clear span/diameter, or multicell buried Structure where the cumulative span is less than 5m and having more than 1m cover;
 - (iii) a conventional retaining wall without tie-back anchors and less than 3m retained height; or

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- (iv) mechanically stabilized earth with concrete facing panel systems less than 3m in height.
- (b) Category I. Simple individual Structures provided they conform to one of the following:
 - (i) a conventional retaining wall without tie-back anchors and with 3m or more but less than 7m retained height;
 - (ii) a buried concrete box or corrugated steel buried Structure with less than 8m span;
 - (iii) a Structure with a simply supported single span of less than 20m and having less than 25 deg. skew;
 - (iv) mechanically stabilized earth with concrete facing panel system with 3m, or more but less than 7m, in height; or
 - (v) noise walls 3m or more than 3m in height.
- (c) Category II. All those Structures not within the parameters of Categories 0, I or III.
- (d) Category III. Structures which:
 - (i) require sophisticated analysis; or
 - (ii) contain low structural redundancy; or
 - (iii) contain unconventional design aspects; or
 - (iv) have any span exceeding 50 metres; or
 - (v) have a skew exceeding 45 degrees; or
 - (vi) have unusual or complex Foundation configurations; or
 - (vii) are Bridges with suspension systems, cable stayed Bridges, steel Bridges with orthotropic decks, floating structures, hinged arch structures and all tunnels, movable Bridges and Bridge access gantries; or
 - (viii) are Lifeline Structures; or
 - (ix) are retaining walls with tie-back anchoring systems.

All Bridges on the Project shall be Category III Structures.

3.3 Existing Structures

The assessment of existing Structures (whether existing on the date of this Agreement or constructed as part of the Project Work) and the renewal or strengthening work affecting structural integrity of existing Structures shall be categorized on the basis of the original Structure unless otherwise agreed by the Province.

3.4 Category Proposal

As soon as sufficient Design Data for a Structure (other than Bridges, which shall be Category III Structures) has been prepared to allow the determination of a category, the Design-Builder shall submit its proposed category (together with such Design Data as necessary to support that proposal) to the Province's Representative in accordance with the Review Procedure.

3.5 Structure Checking Procedure

Design Data relating to each Structure (including without limitation calculations, assessments, drawings and bar schedules) shall be checked as follows:

- (a) Category 0 and Category I Structures require an independent check by a Professional Engineer, other than the engineer who designed the Structure. The checking Professional Engineer may be from the original Design Team.
- (b) Category II Structures require a check by a Checking Team which may be from the Designer but shall be independent of the Design Team.
- (c) Category III Structures require a check to be carried out by a Checking Team appointed to perform an independent detailed check by experts in Bridge structural analysis and design, and in seismic design by an organization not related to the Designer. The Checking Team shall report directly to the Design-Builder.

In addition to the checking procedures required above, the Design-Builder shall conduct all checking procedures required by EGBC.

3.6 Checking Team

At the time it submits the initial Design Management Plan, the Design-Builder shall submit to the Province's Representative under the Consent Procedure a proposal, which shall be supported by a resume for each member of the proposed Checking Team, as to the organization to serve as the Checking Team and the proposed terms and conditions of its employment. The following responsibilities and expertise shall be required of and incorporated in the Checking Team for Category III Structures:

- (a) The Checking Team shall be responsible for:
 - (i) conducting design checks to ensure that the design of such Category III Structures meets performance expectations outlined in this Agreement and that such design is carried out according to accepted industry standards;
 - (ii) conducting checks of liquefaction assessments and ground displacement analyses including verifying assessment and analysis methodologies, and soil structure interaction analyses to demonstrate that seismic performance requirements are met;
 - (iii) undertaking supplementary analyses to independently verify and confirm the design methodologies and assumptions used;

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- (iv) identifying deficiencies in the design and analyses, and notifying the Design-Builder and the Province of unresolved deficiencies;
 - (v) conducting analyses and design checks to confirm the requirements of seismic Performance Based Design;
 - (vi) checking the Designers' materials and construction specification for deep Foundation designs; and
 - (vii) checking the Designers' acceptance criteria for deep Foundations and verifying acceptance of deep Foundation elements construction.
- (b) The following expertise shall be included in the expertise of the Checking Team:
- (i) recognized structural and geotechnical expertise in seismic design and analysis of Bridges located in high seismic risk regions and in soils susceptible to liquefaction;
 - (ii) recognized expertise in ground improvement methods to mitigate liquefaction;
 - (iii) individuals who are generally recognized experts in the Performance Based Design seismic design provisions of the BC Supplement to CAN/CSA-S6-14 and CAN/CSA-S6-14; and
 - (iv) individuals who are registered or qualified to be registered as Professional Engineers.

3.7 Structure Design Checking Responsibility

The Design Team, Designer and the Checking Team shall each satisfy itself as to the applicability and accuracy of all computer programs used and shall ensure the validity of the program for each application. The Design Team, Designer and the Checking Team shall each also be responsible for its own interpretation of the relevant ground information.

3.8 Independence

Independence of the Design Team and Checking Team, and the independence of the Designer and the Design-Builder, shall be maintained at all times. The method of analysis they employ need not be the same. They may consult each other to ensure that the results they are obtaining are directly comparable.

ARTICLE 4 DESIGN CERTIFICATION

4.1 Design Certificates

The Design-Builder shall issue a Design Certificate for each Final Design package that is submitted. All Design Certificates shall be:

- (a) on the appropriate form(s) attached as Appendix C [Form of Certificates] to this Schedule; and

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- (b) be signed and sealed by the responsible engineer, who shall be a Professional Engineer and a principal of the Designer, and by the Design-Builder's Representative (or, in the case only of Design Certificates for environmental works incorporated in the Project Work, the Environmental Director).

All parties that sign Design Certificates shall clearly print their name and position held in their organization.

4.2 Submission of Design Certificates

All Design Certificates together with the supporting documentation shall be submitted to the Province's Representative in accordance with the Review Procedure with original signatures, seals and registration numbers and in such form as to allow the Province to perform its function in respect of such Design Certificate without delay.

4.3 Road Safety Audit Certificates

- (a) The Design-Builder shall submit to the Province's Representative a certificate (a "**Road Safety Audit Certificate**") in the form attached as Appendix C [Form of Certificates] to this Schedule in respect of the Stage 1, Stage 2 and Stage 3 Road Safety Audits respectively. Each Road Safety Audit Certificate shall be signed by the Designer, the Road Safety Audit Team, the Design-Builder and the Design-Builder's Representative.
- (b) The Stage 3 Road Safety Audit Certificate shall be provided to the Owner's Engineer and the Certificate of Substantial Completion shall not be issued unless a Stage 3 Road Safety Audit Certificate in respect thereof has been submitted and signed by the Designer, the Road Safety Audit Team, the Design-Builder and the Design-Builder's Representative.

ARTICLE 5 TESTING

5.1 Conduct of Testing

To the extent and in the manner provided by the Design Management Plan, Quality Documentation and other Project Requirements, all testing shall be carried out by a duly accredited and certified testing facility and organization. The Province's Representative shall be given timely advance notice (being not less than 2 Business Days) of the date of such tests, unless the Province gives written notice that it does not require such notice for any categories of tests. The Province shall be entitled to attend at any test. Any materials or Plant which fail such tests shall be rejected.

5.2 Test Recording and Reporting

With respect to continuous testing operations (such as concrete quality, structural concrete strengths, aggregate quality, compaction tests and bituminous material quality) the Design-Builder shall provide to the Province's Representative at regular intervals (not to exceed weekly unless otherwise agreed) test summary sheets and statistical analyses indicating strength and quality trends and shall do so in accordance with the requirements of Schedule 17 [Records and Reports], including Section 1.6 [Province Access to Records].

ARTICLE 6 CONSTRUCTION CERTIFICATION

6.1 Construction Certificates

The Design-Builder shall, in accordance with the procedures set out in the Design Management Plan and the relevant Quality Documentation or other Project Requirements, submit Construction Certificates to the Province's Representative in accordance with the Review Procedure. Construction Certificates shall be submitted to the Province's Representative prior to opening any New Project Infrastructure for use by the public. All Construction Certificates shall be signed by the Design-Builder's Representative, the Designer and the Design-Builder. The Design-Builder shall provide a copy of all Construction Certificates to the Owner's Engineer.

6.2 Deliverables for Substantial Completion

Without limiting the Design-Builder's obligations under this Agreement, the Design-Builder shall deliver the deliverables set out in Part I [Deliverables for Substantial Completion] of Appendix A to this Schedule prior to Substantial Completion.

6.3 Deliverables for Total Completion

Without limiting the Design-Builder's obligations under this Agreement, the Design-Builder shall deliver the deliverables set out in Part II [Deliverables for Total Completion] of Appendix A to this Schedule prior to Total Completion.

6.4 Requirements for Substantial Completion

Substantial Completion shall only be achieved after:

- (a) all Construction Certificates have been issued in respect of the New Project Infrastructure, other than in respect of the Deferred Paving and the Deferred Electrical and Lighting;
- (b) a Stage 3 Road Safety Audit Certificate has been issued in accordance with Section 13.4.4 [Stage 3: Post Construction Road Safety Audit] of Part 2 of this Schedule; and
- (c) all relevant quality inspections and audits have been satisfactorily completed in accordance with the Design Management Plan, the Quality Documentation and other relevant provisions of this Agreement and provided to the Province demonstrating that the New Project Infrastructure has been Substantially Completed in accordance with all applicable Project Requirements and other requirements of this Agreement.

6.5 Notice of Substantial Completion

- (a) The Design-Builder shall issue to the Owner's Engineer and the Province's Representative a notice informing them at least 15 Business Days but no more than 30 Business Days prior to the date upon which the Design-Builder expects Substantial Completion. If the Design-Builder has at any time reason to believe that the said date expected for Substantial Completion shall be delayed or achieved earlier by more than five Business Days, it shall issue a fresh notice informing the Owner's Engineer and the Province's Representative of the new date expected for Substantial Completion.

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- (b) At the same time that the Design-Builder delivers a notice under Section 6.5(a) of this Part, the Design-Builder shall submit to the Province's Representative for review, acting reasonably, in accordance with the Review Procedure, and to the Owner's Engineer an updated list of any defects or deficiencies in the Project Work (the "**Final Deficiency List**"), which list shall:
- (i) identify all outstanding defects or deficiencies in the Project Work that the Design-Builder expects to remain outstanding as of Substantial Completion and required to be corrected by the Design-Builder in order to achieve Total Completion, which defects or deficiencies shall include any failure by the Design-Builder to deliver a deliverable required by Part I [Substantial Completion Deliverables] of Appendix A to this Schedule prior to Substantial Completion;
 - (ii) include the Design-Builder's estimate of the cost to remedy each defect or deficiency (the amount of such costs being, if not objected to by the Province's Representative after review, acting reasonably, in accordance with the Review Procedure, or, if objected to, as agreed or determined in accordance with the Review Procedure or the Dispute Resolution Procedure, as the case may be, the "**Agreed Remedy Cost**"); and
 - (iii) the Design-Builder's proposed date for the remedy of each defect or deficiency, which date shall be no later than the Total Completion Target Date.

6.6 Inspection for Substantial Completion

Upon the Design-Builder issuing a notice contemplated in Section 6.5 [Notice of Substantial Completion] of this Part, and subject to the delivery to the Owner's Engineer and the Province's Representative of Construction Certificates in respect of the Substantial Completion of all of the New Project Infrastructure and all other relevant Certificates and supporting documentation in accordance with the Design and Certification Procedure, the Province and the Design-Builder shall cause the Owner's Engineer to commence, within 10 Business Days of receipt of such notice, an inspection of the New Project Infrastructure to determine whether Substantial Completion has been achieved and whether the Final Deficiency List is correct.

6.7 Issuance of Certificate of Substantial Completion and Signing of Final Deficiency List

- (a) The Province and the Design-Builder shall cause the Owner's Engineer, within 25 Business Days of the commencement of the inspection under Section 6.6 [Inspection for Substantial Completion] of this Part, to either:
- (i) issue the Certificate of Substantial Completion, stating the Substantial Completion Date, to the Province and the Design-Builder; or
 - (ii) notify the Design-Builder and the Province's Representative of its decision not to issue the applicable Certificate of Substantial Completion and state the reasons in detail for such decision, including what further work may be required to achieve Substantial Completion.

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- (b) The Province and the Design-Builder shall cause the Owner's Engineer, within 15 Business Days after the commencement of the inspection under Section 6.6 [Inspection for Substantial Completion] of this Part, to either:
 - (i) sign the Final Deficiency List to reflect the Owner's Engineer's determination that the Final Deficiency List is correct; or
 - (ii) notify the Design-Builder and the Province's Representative of its decision not to sign the Final Deficiency List and state the reasons in detail for such decision, including what further defects or deficiencies in the Project Work should be added to the Final Deficiency List.

6.8 Refusal to Issue Certificate of Substantial Completion or Sign Final Deficiency List

- (a) The Owner's Engineer shall refuse to issue the Certificate of Substantial Completion, only if the New Project Infrastructure is not Substantially Complete, or any other conditions or requirements under the Agreement to the achievement of Substantial Completion have not been satisfied or complied with.
- (b) The Owner's Engineer shall refuse to sign the Final Deficiency List only if the Owner's Engineer does not agree that such list correctly sets out the defects or deficiencies in the Project Work as of Substantial Completion and that are required to be remedied in order to achieve Total Completion.

6.9 Completion of Further Work for Substantial Completion

- (a) In the event of service of a notice by the Owner's Engineer under Section 6.7(a)(ii) of this Part, the Design-Builder shall issue to the Owner's Engineer a notice not less than five Business Days but no more than 10 Business Days prior to the date upon which the Design-Builder expects to complete such further work or other measures necessary or appropriate to remedy or remove the cause of the Owner's Engineer's refusal to issue the Certificate of Substantial Completion.
- (b) In the event of service of a notice by the Owner's Engineer under Section 6.7(b)(ii) of this Part, the Design-Builder shall amend the Final Deficiency List to include:
 - (i) the further defects or deficiencies in the Project Work to be added to the Final Deficiency List;
 - (ii) the Design-Builder's estimate of the cost to remedy each such further defect or deficiency (the amount of such costs being, if not objected to by the Province's Representative after review, acting reasonably, in accordance with the Review Procedure, or, if objected to, as agreed or determined in accordance with the Review Procedure or the Dispute Resolution Procedure, as the case may be, the Agreed Remedy Cost in respect of such defects or deficiencies); and
 - (iii) the Design-Builder's proposed date for the remedy of each further defect or deficiency, which date shall be no later than the Total Completion Target Date.
- (c) Upon the Design-Builder notifying the Owner's Engineer and the Province's Representative that such further work or measures necessary or appropriate have been completed or, as the

case may be, the Final Deficiency List has been amended in accordance with Section 6.9(b) of this Part, the Province and the Design-Builder shall cause the Owner's Engineer to commence within 10 Business Days of the notice of completion an inspection of such further work or measures and/or to review the amended Final Deficiency List and the provisions of Section 6.5 [Notice of Substantial Completion] of this Part through to this Section, inclusive, shall apply *mutatis mutandis*.

6.10 Outstanding Work for Total Completion

- (a) The Province shall be entitled to hold back from the Substantial Completion Payment the amount permitted by Section 3.1 [Deficiency Holdback] of Schedule 5 on account of any defects or deficiencies in the Project Work as identified on the Final Deficiency List signed by the Owner's Engineer pursuant to Section 6.7(b)(i) of this Part.
- (b) Notwithstanding the issue of a Certificate of Substantial Completion, the Design-Builder shall promptly complete all outstanding Project Work required to achieve Total Completion as soon as practicable

6.11 Requirements for Total Completion

Total Completion shall only be achieved after:

- (a) all Construction Certificates have been issued in respect of the Deferred Paving and the Deferred Electrical and Lighting;
- (b) the completion of the remedy of all Final Deficiency List Deficiencies;
- (c) the Design-Builder has provided to the Province's Representative all required deliverables in accordance with Section 6.3 [Deliverables for Total Completion] of this Part; and
- (d) all demolition, removal and disposal of Infrastructure shall have been completed in accordance with Article 14 [Demolitions, Removals and Disposal] of Part 2 of this Schedule.

6.12 Notice of Total Completion

The Design-Builder shall issue to the Owner's Engineer and the Province's Representative a notice informing them at least 15 Business Days but no more than 30 Business Days prior to the date upon which the Design-Builder expects Total Completion. If the Design-Builder has at any time reason to believe that such expected date for Total Completion shall be delayed or achieved earlier by more than five Business Days, it shall issue a fresh notice informing the Owner's Engineer and the Province's Representative of the new date expected for Total Completion.

6.13 Inspection for Total Completion

Upon the Design-Builder issuing a notice contemplated in Section 6.12 [Notice of Total Completion] of this Part and subject to the delivery to the Owner's Engineer and the Province's Representative of Construction Certificates for the Total Completion of all of the New Project Infrastructure and all other relevant Certificates and supporting documentation in accordance with the Design and Certification Procedure, the Design-Builder shall cause the Owner's Engineer to commence, within 10 Business Days

of receipt of such notice, an inspection of the New Project Infrastructure to determine whether Total Completion has been achieved.

6.14 Issuance of Certificate of Total Completion

The Province and the Design-Builder shall cause the Owner's Engineer, within 20 Business Days of the commencement of the inspection pursuant to Section 6.13 [Inspection for Total Completion] of this Part, to either:

- (a) issue the Certificate of Total Completion, stating the Total Completion Date, to the Province and the Design-Builder; or
- (b) notify the Design-Builder and the Province's Representative of its decision not to issue the Certificate of Total Completion and state the reasons in detail for such decision.

6.15 Refusal to Issue Certificate of Total Completion

The Owner's Engineer shall refuse to issue the Certificate of Total Completion only if the New Project Infrastructure is not Totally Complete, or any other conditions or requirements under the Agreement to the achievement of Total Completion have not been satisfied or complied with.

6.16 Completion of Further Work for Total Completion

In the event of service of a notice by the Owner's Engineer under Section 6.14(b) of this Part, the Design-Builder shall issue to the Owner's Engineer a notice not less than five Business Days but no more than 10 Business Days prior to the date upon which the Design-Builder expects to complete such further work or other measures necessary or appropriate to remedy or remove the cause of the Owner's Engineer's refusal to issue the Certificate of Total Completion. Upon the Design-Builder notifying the Owner's Engineer and the Province's Representative that such further work or measures necessary or appropriate have been completed, the Province and the Design-Builder shall cause the Owner's Engineer to commence within 10 Business Days of the notice of completion an inspection of such further work or measures and the provisions of Sections 6.12 [Notice of Total Completion] of this Part through to this Section, inclusive, shall apply *mutatis mutandis*.

6.17 Submissions by Province

The Province may, at any time, following receipt of notice given by the Design-Builder pursuant to either of Section 6.5 [Notice of Substantial Completion] or Section 6.12 [Notice of Total Completion] of this Part, as applicable, and prior to the Owner's Engineer issuing or notifying the Design-Builder and the Province's Representative of its decision not to issue a Certificate of Substantial Completion or Certificate of Total Completion, as the case may be, provide the Owner's Engineer and the Design-Builder with the Province's submissions as to whether the conditions for issuance of such Certificate of Substantial Completion or Certificate of Total Completion, as the case may be, have been satisfied and, if applicable, any reasons as to why the Province considers that such Certificate of Substantial Completion or Certificate of Total Completion, as the case may be, should not be issued. The Owner's Engineer shall consider such submissions in determining whether to issue such Certificate of Substantial Completion or Certificate of Total Completion, as the case may be.

6.18 No Limitation

The issuance of any Certificate of Substantial Completion or any Certificate of Total Completion shall be without prejudice to and shall not in any way limit the rights and obligations of the parties under and in accordance with this Agreement.

6.19 Disputed Certificate

If there is any dispute between the parties as to the decision of the Owner's Engineer to issue or not to issue any Certificate of Substantial Completion or any Certificate of Total Completion in accordance with this Part, then either the Province or the Design-Builder may refer such dispute for resolution under the Dispute Resolution Procedure.

6.20 Certificate Effective Pending Dispute

Notwithstanding any other provision in this Agreement or Schedule 16 [Dispute Resolution Procedure], if the Owner's Engineer has issued any Certificate of Substantial Completion or any Certificate of Total Completion and the Province or the Design-Builder has referred a dispute in respect thereof for resolution under the Dispute Resolution Procedure pursuant to Section 6.19 [Disputed Certificate] of this Part, then for all purposes of this Agreement such Certificate of Substantial Completion or such Certificate of Total Completion, as the case may be, shall be deemed to have been issued unless and until it is determined in accordance with the Dispute Resolution Procedure that it was improperly issued by the Owner's Engineer in accordance with the terms of this Part.

**PART 4
TRAFFIC MANAGEMENT**

ARTICLE 1 GENERAL TRAFFIC MANAGEMENT REQUIREMENTS

1.1 Order of Precedence

The Design-Builder's Traffic Management Plan and traffic control operations for all Construction shall be in accordance with the criteria contained in this Part and the following codes and standards and if there is any conflict between the criteria and any of the Reference Documents, the following shall apply in descending order of precedence:

- (a) the criteria contained in this Part;
- (b) the applicable Ministry Technical Circulars and Technical Bulletins included in the Reference Documents;
- (c) the Traffic Management Manual;
- (d) Traffic Management Guidelines for Work on Roadways;
- (e) the DBSS;
- (f) Electrical and Traffic Engineering Manual;
- (g) Manual of Standard Traffic Signs and Pavement Markings;
- (h) Electrical and Signing Materials Standards;
- (i) Specifications for Standard Highway Sign Materials, Fabrication and Supply;
- (j) BC Supplement to TAC;
- (k) TAC Geometric Design Guide;
- (l) TAC Bikeway Traffic Control Guidelines; and
- (m) the applicable documented standards of the Municipality.

1.2 Recognized Products List

All traffic control devices used in the Project are to be selected from the Recognized Products List. The use of traffic control devices not on the Recognized Products List requires written acceptance from the Province in accordance with the Consent Procedure.

1.3 General Requirements

- (a) The restrictions outlined in this Part 4 shall be the basis for the development of the Traffic Management Plan and Traffic Control Plans. Variations to the restrictions at specific locations may be permitted for such specific locations, but only if substantiated through a plan by the Design-Builder that addresses, at a minimum, traffic requirements, analysis and stakeholder

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consultation, where applicable, and such plan is accepted by the Province in accordance with the Consent Procedure.

- (b) Available traffic data is posted in the Data Room. All traffic data used for analysis for Traffic Management purposes shall be less than six months old. The Design-Builder shall be responsible for obtaining any traffic data necessary for traffic analysis.
- (c) All existing road capacities and intersection turning movements, capacities and storage lengths shall be maintained during Restricted Periods.
- (d) Implementation and removal of any Lane Closures, Stoppages, Full Closures, Detour Routes, Lane Shifts or other changes in traffic patterns shall be completed outside of Restricted Periods.
- (e) The Design-Builder shall not engage in any activity that could result in the occurrence of a Traffic Disruption Event, or that could otherwise impede or disrupt the flow of traffic, during a Restricted Period.
- (f) The Province may, in its discretion, temporarily adjust the Traffic Disruption Event restrictions identified in this Part in circumstances considered appropriate by the Province including, without limitation, for the purposes of or during Statutory Holidays, unspecified Special Events, Incidents and Operation and Maintenance.
- (g) The Province may direct the Design-Builder, on 30 days advance notice, to eliminate any or all Traffic Disruption Events and initiate free-flow traffic for a 24 hour period from midnight to midnight on the day of any major planned event other than a Special Event.
- (h) If the Design-Builder's Traffic Control Supervisor determines that any traffic delays, queues or disruptions are excessive (meaning, where the extent of vehicular queues affect upstream intersection or interchange operations or the ability of vehicles on a highway to exit at upstream interchange ramps), the Design-Builder shall cease any relevant roadway Construction and safely make all the necessary travel lanes available to traffic as quickly as possible.
- (i) Any proposed Lane Closures, Full Closures, Stoppages, Detour Routes and Lane Shifts not included in the Design-Builder's accepted Traffic Control Plan shall be subject to prior acceptance by the Province in accordance with the Consent Procedure.
- (j) Multiple active Construction zones along Highway 91, Highway 17, Highway 99, Highway 91C, Interchange Ramps, Other Specified Roads or River Road or routes between them, such that traffic encounters multiple disruptions or discontinuity in the lane geometries, shall not be permitted.
- (k) The Design-Builder shall not use private roads without making prior arrangements with all affected or Interested Parties and the Province. The Design-Builder shall be responsible for all costs arising from or in connection with the use of the private roads.
- (l) Physical access to all adjacent properties shall be maintained throughout active Construction zones.

- (m) Construction vehicle access to active Construction zones on Highway 91, Highway 17, Highway 99, Highway 91C and Interchange Ramps shall be permitted only outside of the applicable Restricted Periods, unless separate acceleration and deceleration lanes are provided from and to such active Construction zones. Design of acceleration and deceleration lanes shall take into account all construction vehicle types to be used in the performance of the relevant Project Work.
- (n) Existing emergency turnarounds shall either be maintained or relocated in the immediate vicinity.
- (o) Full access for emergency and first responders shall be maintained at all times.
- (p) For existing intersections during periods other than Restricted Periods, all existing turning movements shall be retained unless otherwise accepted by the Province in accordance with the Consent Procedure.

1.4 Location and Storage of Materials and Equipment

The Design-Builder shall not store equipment on the travel portion or Shoulder of any road at any time. Equipment stored within the Clear Zone of any road shall be protected by barriers.

1.5 Accommodation of Rail Traffic

The Design-Builder shall accommodate rail traffic in accordance with this Agreement including, without limitation, the Railway Agreements and the Reference Documents.

1.6 Incident Management

The Design-Builder shall implement incident management in accordance with the Incident Management Plan.

1.7 Special Events

The Design-Builder shall comply with the following requirements when scheduling hours of work or the Design-Builder-initiated Traffic Disruption Events during the following events and circumstances (together, “**Special Events**”), provided that such requirements shall not apply to Other Specified Roads and River Road:

- (a) The Design-Builder shall not implement any Traffic Disruption Events during Special Event Restricted Periods set out in Table 1.7b in relation to any of the holiday events identified in Table 1.7a (each a Special Event).

Table 1.7a

Holiday Events	
New Year’s Day	British Columbia Day
BC Family Day	Labour Day
Good Friday	Thanksgiving Day
Easter Monday	Remembrance Day
Victoria Day	Christmas Day
Canada Day	Boxing Day

Table 1.7b

Special Event Restricted Periods	
Day on which Special Event falls	Timeframes for Restrictions
Weekday (Monday to Friday)	From 12:00 pm (noon) of the weekday before the Special Event to 12:00 pm (noon) of the weekday following the Special Event
Weekend (Saturday, Sunday)	From 12:00 pm (noon) of the Friday before the Special Event to 12:00 pm (noon) of the Tuesday following the Special Event

- (b) The Design-Builder shall actively search for other major events in the region that may affect traffic volumes on Highway 91, Highway 17 and Highway 99 (e.g. the Celebration of Light, sporting events, parades, etc). The Design-Builder shall assess these events for their effect on traffic and alter the Traffic Control Plans appropriately.

1.8 Detour Route and Lane Shift Requirements

1.8.1 General

- (a) All Detour Routes and Lane Shifts shall be paved with appropriate Pavement Markings and signs placed in accordance with the Traffic Management Manual.
- (b) The Design-Builder shall ensure that the condition of the pavement used for all Detour Routes and Lane Shifts is adequate for its intended purpose, and does not adversely impact on the safety and intended function of such Detour Routes and Lane Shifts.
- (c) The Design-Builder shall schedule Construction such that no milled surface shall be open to traffic for more than one daytime shift. Each milled surface open to traffic shall be clean and allow adequate drainage.
- (d) The Design-Builder shall prepare an engineered design for each Detour Route and Lane Shift that shall conform to the minimum Design requirements of the Traffic Management Manual and this Part.
- (e) The Design-Builder shall provide Detour Routes and Lane Shifts with adequate drainage facilities to prevent hydroplaning, pooling of water on and flow of water across the roadway and not unduly flood the adjacent properties and/or facilities.
- (f) Variations to the Detour Route and Lane Shift Design criteria shall not be permitted unless accepted by the Province in accordance with the Consent Procedure.

1.8.2 Traffic Control Devices

- (a) Construction and Advisory Signs
 - (i) The Design-Builder shall be responsible for the design, supply, installation, relocation, maintenance, and removal of all requisite signage and Pavement Markings, including temporary regulatory, warning, guide, advisory, directional,

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border wait time and dynamic message signs. The location and type of each sign shall be indicated on the Traffic Control Plan in accordance with the Electrical and Signing Materials Standards, the Traffic Management Manual and the Manual of Standard Traffic Signs and Pavement Markings.

- (ii) In accordance with Section 194 [Traffic Management for Work Zones] of the DBSS, all standard signs, new and replacement, shall meet the Specifications for Standard Highway Sign Materials, Fabrication and Supply.
- (b) Portable Dynamic Message Signs
- (i) The Design-Builder shall provide portable Dynamic Message Signs (“**Portable Dynamic Message Signs**” or “**PDMS**”) as required and shall use PDMS to provide advance notification of planned traffic pattern changes in accordance with Section 4.1.8 of Schedule 9 [Communication and Engagement]. Sign locations and messages shall be as shown on the Traffic Control Plan. In addition, the Design-Builder is to use PDMS to provide notification of Incidents or unplanned traffic pattern changes, as deemed necessary by the Incident Management Plan.
 - (ii) When in operation, the bottom of each PDMS shall be a minimum of 2 m above the road surface, and shall be level and capable of pivoting for visibility purposes.
- (c) Speed Reader Boards
- (i) The Design-Builder shall provide Speed Reader Boards (“**SRB**”) for use as required by the Province’s Representative.
 - (ii) The deployment of the SRBs with regards to application and placement shall be in accordance with Section 4.11.3 of the Traffic Management Manual.

1.8.3 Concrete Roadside Barrier Requirements

- (a) As a minimum, the Design-Builder shall supply and install temporary concrete roadside barriers:
 - (i) between traffic and median wall construction;
 - (ii) between traffic and excavations/embankment construction;
 - (iii) between traffic and Underpass/Overpass construction;
 - (iv) to meet drop-off delineation requirements; and
 - (v) where required by the Design-Builder’s Traffic Control Plan.
- (b) Traffic barriers used for Detour Routes and Lane Shifts, or used for the protection of the Project Site, shall be continuous or adequately protected by terminals, flares, or impact attenuators in accordance with the AASHTO MASH Test Level 3. Temporary barriers shall have reflectors installed in accordance with the Manual of Standard Traffic Signs and Pavement Markings.

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- (c) Where equipment is actively working adjacent to the Highway 91, Highway 17, Highway 99, Highway 91C and Interchange Ramps, in order to avoid driver distraction, headlight glare and to inhibit debris from blowing onto the travel surfaces, visual screens shall be installed on or adjacent to barriers. The Design-Builder shall submit the product proposed for visual screens to the Province's Representative for acceptance in accordance with the Consent Procedure.
- (d) Where traffic barriers are used, the Design-Builder shall make adequate provision for drainage and removal of snow, ice and debris.

1.8.4 Drop-Offs

The Design-Builder shall perform all Construction so as to minimize any drop-offs (abrupt changes in roadway elevation) left exposed to traffic during non-working hours. Drop-offs left exposed to traffic during non-working hours shall be delineated as follows:

- (a) Drop-offs up to 60 mm may remain exposed with appropriate traffic control devices alerting motorists to the condition. However, no drop-offs shall be allowed between adjacent lanes of traffic.
- (b) Drop-offs greater than 60 mm that are in the roadway or Shoulder shall be delineated with appropriate traffic control devices and further delineated as described in paragraph (c) below. Subject to a Road Safety Audit, the Design-Builder may use channelizing devices as listed in paragraph (c) below provided that the Design-Builder's Traffic Control Plan can demonstrate the effectiveness of the relevant channelizing device(s) and the drop-off is less than 100 mm.
- (c) Drop-offs greater than 60 mm but less than 150 mm that are not within the roadway or Shoulder shall be delineated with appropriate traffic control devices and further protected or delineated in accordance with at least one of the following:
 - (i) A wedge of compacted stable material (25 mm well graded base course aggregate or better) placed at a slope of 4:1 or flatter;
 - (ii) Channelizing devices (Type 1 barricades, plastic safety drums, or other devices 1 m or more in height) placed along the traffic side of the drop-off and a new edge-of-pavement stripe placed a minimum of 2 m from the drop-off. Appropriate traffic control devices shall be placed in advance of and throughout the drop-off treatment;
 - (iii) Temporary concrete barrier, or other accepted barrier, installed on the traffic side of the drop-off with 300 mm between the drop-off and the back of the barrier and a new edge-of-pavement stripe placed a minimum of 500 mm from the face of the barrier. An accepted terminal, flare, or impact attenuator shall be required at the beginning of the section. For night use, the barrier shall have reflective markers and/or warning lights.
- (d) Drop-offs of more than 150 mm that are not within the roadway or Shoulder shall be delineated with appropriate traffic control devices and further delineated as indicated in paragraph (c) above if all of the following conditions are met:
 - (i) the drop-off is less than 600 mm;

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- (ii) the drop-off does not remain for more than three consecutive days;
 - (iii) the drop-off is not present at any time during any Special Event Restricted Period described in Section 1.7 [Special Events] of this Part; and
 - (iv) the drop-off is only on one side of the roadway.
- (e) Drop-offs of more than 150 mm that are not within the roadway or Shoulder and are not otherwise covered by (d) above shall be delineated with appropriate traffic control devices and further delineated as indicated in Sections 1.8.4(c)(i) and (ii) of this Part.
- (f) Any drop-off of over 150 mm in height shall be protected with concrete roadside barrier with end treatments as required by the Traffic Management Manual.

All areas of excavation and their proposed safety measures shall be shown in the Traffic Control Plan.

1.8.5 Temporary Pavement Markings

- (a) Further to Section 4.4 of the Traffic Management Manual, the Design-Builder shall be responsible for the application, maintenance and removal of all temporary Pavement Markings and reflective devices. Only permanent Pavement Markings shall be applied to the final pavement surface.
- (b) When traffic lanes are to be redefined for long-duration work (more than one daytime shift), the Design-Builder shall eradicate all redundant temporary or permanent Pavement Markings that are not required for the intended traffic patterns (without leaving excessive grooves on the pavement surface) and install revised markings.
- (c) Notwithstanding Section 194.45 of the DBSS, the Design-Builder shall supply all temporary Pavement Markings. The material used for any temporary Pavement Markings shall be paint with glass bead or thermoplastic marking supplemented with temporary overlay markers or raised pavement markings.
- (d) The Design-Builder shall apply all Pavement Markings in accordance with the signing and pavement markings drawings and the Detour Route and Lane Shift Design drawings.
- (e) The Design-Builder shall maintain positive delineation at all times and shall re-apply temporary pavement markings, raised pavement markers, delineators and barrier reflectors that are faded, damaged or missing.
- (f) Raised pavement markers shall be installed on any Detour Routes and Lane Shifts on Highway 91, Highway 17 Highway 91C and Interchange Ramps in accordance with the Signing and Pavement Marking Manual.

1.8.6 Speed Limits and Safe Passage through Project Site

- (a) Further to Section 2.4 of the Traffic Management Manual, the Province reserves the right to determine speed limits within the Project Site. Unless specified in this Part or agreed to in writing by the Province, the existing speed limits shall be maintained.

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- (b) Where the Province considers it is either not practical on a Detour Route or Lane Shift to achieve a Design speed equal to the existing posted speed, or where a temporary speed zone has been established within active Construction zones for short-duration work (not more than one shift), then a temporary reduction in speed limit may be granted. The Design-Builder may seek the acceptance of the Province, in its discretion, in accordance with the Consent Procedure, of a temporary reduction in the speed limit to a construction zone speed limit through an active Construction zone

1.9 Existing Traffic Signals

- (a) Modifications to existing traffic signals shall be undertaken in accordance with Section 1.5 [Traffic Engineering] and Section 6.5 [Traffic Signals] of Part 2 of this Schedule
- (b) The Design-Builder shall develop and implement new signal timing plans as required at existing Province owned signalized intersections where Construction shall impact intersection operations.
- (c) The Design-Builder shall be responsible for liaising and coordinating with Municipalities regarding any required modifications to existing municipal signalized intersections.
- (d) Existing signal coordination shall be maintained at all traffic signals affected by the Construction.

1.10 Temporary Traffic Signals and Lighting

- (a) Temporary traffic signals shall be provided where required in accordance with Section 1.5 [Traffic Engineering] and Section 6.5 [Traffic Signals] of Part 2 of this Schedule.
- (b) Temporary lighting shall be provided in accordance with Section 6.7 [Temporary Lighting During Construction] of Part 2 of this Schedule.
- (c) Temporary traffic signals shall be designed and implemented to allow actuated operation.

1.11 Accommodation of Pedestrians and Cyclists

PDC.11.1a The Design-Builder shall ensure passage at each existing facility and crossing point within the Project Site currently used by pedestrians and cyclists is maintained in a safe and efficient manner throughout Construction, except at facilities or crossing points that are to be permanently closed.

- (b) Temporary closures or re-routing of pedestrian or cycling routes may be permitted by the Province contingent upon provision of a suitable alternative route. Any proposed temporary closure or re-routing of pedestrian or cycling routes shall be submitted to the Province's Representative in accordance with the Consent Procedure.
- (c) Any temporary closure of pedestrian or cycling routes exceeding 10 minutes shall be preceded with signage indicating the dates and duration of any closure as well as alternative routes available in accordance with Schedule 9 [Communication and Engagement].

1.12 Accommodation of Transit

- (a) The Design-Builder shall ensure passage along each existing transit route within the Project Site is maintained or rerouted in a safe and efficient manner throughout Construction.
- (b) The Design-Builder shall consult with TransLink and Coast Mountain Bus Company with respect to any Construction that might affect transit operations, facilities, schedules or routing.
- (c) The Design-Builder shall coordinate with TransLink and Coast Mountain Bus Company to prevent adverse impacts on transit operating schedules.
- (d) The Design-Builder shall arrange with TransLink, Coast Mountain Bus Company and the Municipality for any relocation of bus stops and associated facilities.
- (e) The Design-Builder shall design and construct all temporary transit facilities in accordance with the TransLink Bus Infrastructure Design Guidelines.

1.13 Consequences of Occurrence of Non-Permitted Traffic Disruption Events

Traffic Management Payments shall be payable by the Design-Builder to the Province pursuant to and in accordance with Schedule 10 [Payment and Performance Mechanism], in respect of each Non-Permitted Traffic Disruption Event.

ARTICLE 2 HIGHWAY 91, HIGHWAY 17 AND HIGHWAY 99

2.1 General Requirements

- (a) The requirements in this Article 2 are applicable to Highway 91, Highway 17 and Highway 99.
- (b) The Design-Builder shall provide PDMSs to provide advance notice of each scheduled Full Closure, Lane Closure or Detour Route and to provide advance notice of all traffic pattern changes and disruptions. PDMSs (including flashers and other warning devices) shall be placed at strategic upstream locations in order to advance warn motorists and allow them adequate opportunity to divert prior to reaching the Closure or Detour Route location.
- (c) For each scheduled Full Closure, Lane Closure or Detour Route, the Design-Builder shall provide advance notice to the travelling public and other stakeholders of the scheduled Full Closure, Lane Closure or Detour Route in accordance with of Schedule 9 [Communication and Engagement].

2.2 Restricted Periods for Highway 91, Highway 17 and Highway 99

Restricted Periods for Highway 91 (south of Nordel Way) are as follows:

Direction	Weekdays	Saturday	Sunday
Northbound	5:00am – 8:00pm	7:00am – 8:00pm	7:00am – 8:00pm
Southbound	6:30am – 9:00pm	7:00am – 9:00pm	7:00am – 9:00pm

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Commercial in Confidence
Execution

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Restricted Periods for Highway 91 (Alex Fraser Bridge approach) are as follows:

Direction	Mon – Thurs	Friday	Saturday	Sunday
Northbound	4:30am – 7:30pm	4:30am – 8:00pm	7:00am – 7:30pm	8:00am – 7:30pm
Southbound	6:30am – 9:00pm	6:30am – 10:00pm	9:00am – 8:30pm	9:00am – 9:00pm

Restricted Periods for Highway 17 are as follows:

Direction	Weekdays	Saturday	Sunday
Eastbound	6:00am – 8:00pm	9:00am – 8:00pm	10:00am – 8:00pm
Westbound	5:00am – 8:00pm	7:00am – 8:00pm	10:00am – 8:00pm

Restricted Periods for Highway 99 are as follows:

Direction	Weekdays	Saturday	Sunday
Northbound	Not Permitted	Not Permitted	Not Permitted
Southbound	6:00am – 9:00pm	7:00am – 10:00pm	8:00am – 9:00pm

2.3 Lane Closures on Highway 91, Highway 17 and Highway 99

- (a) As a minimum, the number of lanes in each direction existing at the Effective Date on Highway 91, Highway 17 and Highway 99 shall be kept open for traffic during Restricted Periods.
- (b) Except where Full Closures are permitted, a minimum of one basic lane (excluding auxiliary lanes) in each direction for Highway 17 shall be maintained open for general traffic outside of Restricted Periods.
- (c) For Highway 91 and Highway 99, only single lane closures shall be permitted outside of Restricted Periods.

2.4 Stoppages on Highway 91, Highway 17 and Highway 99

Except in the circumstances in which Full Closures are permitted pursuant to Section 2.5 [Full Closures on Highway 91, Highway 17 and Highway 99] of this Part, Stoppages of traffic on Highway 91, Highway 17 and Highway 99 shall not be permitted at any time.

2.5 Full Closures on Highway 91, Highway 17 and Highway 99

Subject to acceptance by the Province in accordance with the Consent Procedure, in exceptional situations (e.g. Bridge girder erection, demolition of existing Structures or sign gantry installation), the Province may permit mainline directional Full Closures on a site specific basis and under the following conditions:

- (a) Full Closures shall not be permitted on Highway 91 (Alex Fraser Bridge approach) and Highway 99.

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- (b) Full Closures shall be permitted only between 12:30 am and 4:00 am.
- (c) Where a Detour Route is provided on-site (e.g. rerouted along Interchange Ramps), then the Full Closure may be permitted up to the entire duration of the hours between 12:30 am and 4:00 am.
- (d) If a Detour Route is not provided on the Project Site, then the Full Closure shall not exceed a duration of twenty (20) minutes, at which time the vehicular queues must be cleared prior to the commencement of another Full Closure.
- (e) If a Detour Route is not provided on the Project Site, there shall not be more than one Full Closure per direction along the entire Project corridor length at any one time (i.e. maximum of one Full Closure location per direction).

2.6 Highway 91 (Alex Fraser Bridge) Counterflow

The Design-Builder shall retain the Alex Fraser Bridge movable barrier counter-flow system and ensure that traffic control layout plans are compatible with the counter-flow system operations.

2.7 Non-Permitted Traffic Disruption Events on Highway 91, Highway 17 and Highway 99

Each of the following Traffic Disruption Events occurring on Highway 91, Highway 17 and Highway 99 is a Non-Permitted Traffic Disruption Event:

- (a) a Lane Closure occurring on Highway 91, Highway 17 and Highway 99:
 - (i) during a Restricted Period for Highway 91, Highway 17 and Highway 99;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 2.3 [Lane Closures on Highway 91, Highway 17 and Highway 99] of this Part;
- (b) a Full Closure occurring on Highway 91, Highway 17 and Highway 99:
 - (i) during a Restricted Period for Highway 91, Highway 17 and Highway 99;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 2.5 [Full Closures on Highway 91, Highway 17 and Highway 99] of this Part; and
- (c) a Stoppage occurring on Highway 91, Highway 17 and Highway 99 in circumstances not expressly permitted pursuant to Section 2.4 [Stoppages on Highway 91, Highway 17 and Highway 99].

2.8 Detour Route and Lane Shift Design Criteria for Highway 91, Highway 17 and Highway 99

- (a) Table 2.8 summarizes the minimum geometric design criteria that shall be incorporated into the Design of all Detour Routes and Lane Shifts for Highway 91, Highway 17 and Highway 99.

Table 2.8

Construction Detour Route and Lane Shift Design Criteria – Highway 91, Highway 17 and Highway 99	
Design/Posted Speed	60 – 70 – 80 km/h ⁽¹⁾
Design Vehicle	WB20
Design Grade	Highway 17: 8% Highway 91: 6% Highway 99: 6%
Maximum Superelevation	6%
Minimum Radius	As per BC Supplement to TAC
Vertical Clearance	The lesser of 5.0 m or existing travel lane clearance
Lane Width	3.5 m travel lanes (min)
Outside Paved Shoulder Width (Open)	2.0 m (min) paved plus 0.5 m (min) gravel
Outside Paved Shoulder Width (Closed by Barrier)	2.5 m (min)
Inside Paved Shoulder Width (Closed by Barrier)	Highway 17: 0.5 m (min) Highway 91: 1.0 m (min) Highway 99: 1.0 m (min)
Side Slopes (w/o Barrier)	The lesser of 4 : 1 (max) or existing

Notes: Minimum Shoulder widths shall be permitted except where dictated otherwise by sight distance requirements, in which case widened Shoulder width in order to meet sight distance requirements shall be provided.

(1) Highway 91 and Highway 99 shall have min. posted speed of 70 km/h

- (b) Notwithstanding the above, localized sections along Highway 91, Highway 17 and Highway 99 (i.e. maximum 300 m length) with both reduced inside and outside Shoulder widths (i.e. minimum 0.5 m) shall be permitted in order to accommodate median pier Construction. Concrete roadside barriers shall be provided along both sides, complete with barrier flares, as required.
- (c) Except as permitted in this Section, variations to the above Detour Route and Lane Shift criteria shall not be permitted unless accepted by the Province in accordance with the Consent Procedure.

ARTICLE 3 HIGHWAY 91C

3.1 General Requirements

- (a) The requirements in this Article 3 are applicable to Highway 91C.
- (b) The Design-Builder shall provide PDMSs to provide advance notice of each scheduled Full Closure, Lane Closure or Detour Route and to provide advance notice of all traffic pattern changes and disruptions. PDMSs (including flashers and other warning devices) shall be

placed at strategic upstream locations in order to advance warn motorists and allow them adequate opportunity to divert prior to reaching the Closure or Detour Route location.

- (c) For each scheduled Full Closure, Lane Closure or Detour Route, the Design-Builder shall provide advance notice to the travelling public and other stakeholders of the scheduled Full Closure, Lane Closure or Detour Route in accordance with of Schedule 9 [Communication and Engagement].
- (d) Vehicular access to/from 7696 Highway 91C, 7949 104 Avenue, and other adjacent properties along the south side of Highway 91C shall be maintained/provided throughout the duration of Construction.

3.2 Restricted Periods for Highway 91C

Restricted Periods for Highway 91C are as follows:

Direction	Weekdays	Saturday	Sunday
Eastbound	5:00am – 9:00pm	8:00am – 9:00pm	8:00am – 9:00pm
Westbound	5:00am – 9:00pm	7:00am – 9:00pm	8:00am – 9:00pm

3.3 Lane Closures on Highway 91C

- (a) As a minimum, the number of lanes in each direction existing as at the Effective Date on Highway 91C shall be kept open for traffic during Restricted Periods for Highway 91C.
- (b) Except in the circumstances in which Full Closures are permitted pursuant to Section 3.5 [Full Closures on Highway 91C] of this Part, a minimum of one basic lane (excluding auxiliary lanes) in each direction on Highway 91C shall be kept open for general traffic outside of Restricted Periods for Highway 91C.

3.4 Stoppages on Highway 91C

Except in the circumstances in which Full Closures are permitted pursuant to Section 3.5 [Full Closures on Highway 91C] of this Part, Stoppages of traffic on Highway 91C shall not be permitted at any time.

3.5 Full Closures on Highway 91C

Subject to acceptance by the Province in accordance with the Consent Procedure, in exceptional situations (e.g. Bridge girder erection, demolition of existing Structures or sign gantry installation), the following directional Full Closures on Highway 91C may be permitted on a site specific basis and under the following conditions:

- (a) Full Closures shall be permitted only between 11:00 pm and 4:30 am.
- (b) Where a Detour Route is provided on the Project Site, then a Full Closure may be permitted up to the entire duration of the period between 11:00 pm and 4:30 am on any day.

- (c) If a Detour Route is not provided on the Project Site, then any Full Closure otherwise permitted under this Section shall not exceed a duration of 20 minutes, at which time the vehicular queues must be cleared prior to the commencement of another Full Closure.
- (d) If a Detour Route is not provided on the Project Site, there shall be permitted no more than one Full Closure per direction on Highway 91C at any time (i.e. maximum of one Full Closure location per direction).

3.6 Non-Permitted Traffic Disruption Events on Highway 91C

Each of the following Traffic Disruption Events occurring on Highway 91C is a Non-Permitted Traffic Disruption Event:

- (a) a Lane Closure occurring on Highway 91C;
 - (i) during a Restricted Period for Highway 91C;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 3.3 [Lane Closures on Highway 91C] of this Part;
- (b) a Full Closure occurring on Highway 91C:
 - (i) during a Restricted Period for Highway 91C;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 3.5 [Full Closures on Highway 91C] of this Part;
- (c) a Stoppage occurring on Highway 91C in circumstances not expressly permitted pursuant to Section 3.4 [Stoppages on Highway 91C] of this Part.

3.7 Detour Route and Lane Shift Design Criteria for Highway 91C

- (a) Table 3.7 summarizes the minimum geometric design criteria that shall be incorporated into the Design of all Detour Routes and Lane Shifts on Highway 91C.

Table 3.7

Construction Detour Route and Lane Shift Design Criteria – Highway 91C	
Design/Posted Speed	50 - 60 km/h
Design Vehicle	WB20
Maximum Grade	8%
Maximum Superelevation	6%

Construction Detour Route and Lane Shift Design Criteria – Highway 91C	
Minimum Radius	As per BC Supplement to TAC
Vertical Clearance	The lesser of 5.0 m or existing travel lane clearance
Lane Width	3.5 m travel lanes (min)
Outside Paved Shoulder Width (Open)	1.5 m (min) paved, plus 0.5 m (min) gravel
Outside Paved Shoulder Width (Closed by Barrier)	2.0 m (min)
Inside Paved Shoulder Width (Closed by Barrier)	0.5 m (min)
Side Slopes (w/o Barrier)	The lesser of 3:1 (max) or existing

Note: Minimum Shoulder widths shall be permitted except where dictated otherwise by sight distance requirements, in which case widened Shoulder width in order to meet sight distance requirements shall be provided.

- (b) Notwithstanding the above, localized sections (i.e. maximum 300 m length) along Highway 91C with both reduced inside and outside Shoulder widths (i.e. minimum 0.5 m) may be permitted in order to accommodate median pier Construction. Concrete roadside barriers shall be provided along both sides, complete with barrier flares, as required.

ARTICLE 4 INTERCHANGE RAMPS

4.1 General Requirements

- (a) The requirements in this Article 4 are applicable to that portion of any entrance or exit ramps connecting Highway 91 to Highway 91C and Other Specified Roads (the “**Interchange Ramps**”).
- (b) The Design-Builder shall provide PDMSs to provide advance notice of each scheduled Full Closure, Lane Closure, Stoppage or Detour Route and to provide advance notice of all traffic pattern changes and disruptions. PDMSs (including flashers and other warning devices) shall be placed at strategic upstream locations in order to warn motorists in advance and allow them adequate opportunity to divert prior to reaching the Closure, Stoppage or Detour Route location.
- (c) All existing ramp turning movements at each interchange location shall be provided outside of Restricted Periods, unless otherwise accepted by the Province in accordance with the Consent Procedure.
- (d) For each scheduled Full Closure, Lane Closure, Stoppage or Detour Route, the Design-Builder shall provide advance notice to the travelling public and other stakeholders of the scheduled Full Closure, Lane Closure, Stoppage or Detour Route in accordance with Schedule 9 [Communication and Engagement].
- (e) Temporary Works at existing on and off ramps shall be designed to prevent queuing onto Highway 91 and Highway 91C.

4.2 Restricted Periods for Interchange Ramps

Restricted Periods for Interchange Ramps are as follows:

Direction	Weekdays	Saturday	Sunday
Northbound	5:00am – 10:00pm	6:00am – 9:00pm	7:00am – 9:00pm
Southbound	5:30am – 10:00pm	8:00am – 9:30pm	9:00am – 10:00pm

4.3 Lane Closures on Interchange Ramps

- (a) All existing ramp turning movements, capacities and storage lengths at each location shall be maintained during Restricted Periods.
- (b) Except in the circumstances in which Stoppages or Full Closures are permitted pursuant to Sections 4.4 [Stoppages on Interchange Ramps] and 4.5 [Full Closures on Interchange Ramps], respectively, of this Part, a minimum of one basic lane (excluding auxiliary lanes) on each Interchange Ramp shall be kept open for general traffic outside of Restricted Periods for Interchange Ramps.

4.4 Stoppages on Interchange Ramps

- (a) Subject to acceptance by the Province in accordance with the Consent Procedure, the following Stoppages shall be permitted outside of Restricted Periods for Interchange Ramps:
 - (i) Stoppages less than two minutes’ duration; and
 - (ii) Stoppages greater than two minutes’ duration but less than 20 minutes’ duration between 1:00 am and 4:00 am only.
- (b) After a Stoppage has been implemented and removed, the Design-Builder shall allow all queues to clear before implementing another Stoppage.

4.5 Full Closures on Interchange Ramps

Subject to acceptance by the Province in accordance with the Consent Procedure in exceptional situations (e.g. Bridge girder erection, demolition of existing Structures or sign gantry installation), the following directional Full Closures on Interchange Ramps may be permitted on a site specific basis and under the following conditions:

- (a) Full Closures shall be permitted only between 1:00 am and 4:00 am.
- (b) Where a Detour Route is provided on the Project Site, then a Full Closure may be permitted up to the entire duration of the period between 1:00 am and 4:00 am on any day.
- (c) If a Detour Route is not provided on the Project Site, then any Full Closure otherwise permitted under this Section shall not exceed a duration of 20 minutes, at which time the vehicular queues must be cleared prior to the commencement of another Full Closure.

4.6 Non-Permitted Traffic Disruption Events on Interchange Ramps

Each of the following Traffic Disruption Events occurring on an Interchange Ramp is a Non-Permitted Traffic Disruption Event:

- (a) a Lane Closure occurring on an Interchange Ramp:
 - (i) during a Restricted Period for Interchange Ramps;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 4.3 [Lane Closures on Interchange Ramps] of this Part;
- (b) a Full Closure occurring on an Interchange Ramp:
 - (i) during a Restricted Period for Interchange Ramps;
 - (ii) during a Special Event Restricted Period in contravention of Section 1.7 [Special Events] of this Part; or
 - (iii) in any other circumstances not expressly permitted pursuant to Section 4.5 [Full Closures on Interchange Ramps] of this Part; or
- (c) a Stoppage occurring on a Ramp in circumstances not expressly permitted pursuant to Section 4.4 [Stoppages on Ramps] of this Part.

4.7 Detour Route and Lane Shift Design Criteria for Interchange Ramps

Table 4.7 summarizes the minimum geometric design criteria that shall be incorporated into the Design of all Detour Routes and Lane Shifts for all Interchange Ramps.

Table 4.7

Construction Detour Routes and Lane Shift Design Criteria – Interchange Ramps	
Design/Posted Speed	40 km/h
Design Vehicle	WB20
Maximum Grade	8%
Maximum Superelevation	6%
Minimum Radius	The lesser of 55 m or existing
Vertical Clearance	The lesser of 5.0 m or existing travel lane clearance
Lane Width	4.5m (min) for one lane ramps
Lane Width	3.5m (min) for two lane ramps
Outside Paved Shoulder Width (Open)	1.0m (min) for one lane ramps
Outside Paved Shoulder Width (Open)	1.5m (min) for two lane ramps
Outside Paved Shoulder Width (Closed by Barrier)	1.5 m (min)
Inside Paved Shoulder Width (Closed by Barrier)	1.0m (min)

Construction Detour Routes and Lane Shift Design Criteria – Interchange Ramps	
Inside Paved Shoulder Width (Open)	0.5m (min)
Side Slopes (w/o Barrier)	The lesser of 3:1 (max) or existing

Note: Minimum Shoulder widths shall be permitted except where dictated otherwise by sight distance requirements, in which case widened Shoulder width in order to meet sight distance requirements shall be provided.

ARTICLE 5 OTHER SPECIFIED ROADS

5.1 General Requirements

- (a) The requirements in this Article 5 are applicable to Nordel Way east of Highway 91, Nordel Way north of Highway 91C, and 96th Street (the “**Other Specified Roads**”).
- (b) The Design-Builder shall provide PDMSs to provide advance notice of each scheduled Full Closure, Lane Closure, Stoppage or Detour Route and to provide advance notice of all traffic pattern changes and disruptions. PDMSs (including flashers and other warning devices) shall be placed at strategic upstream locations in order to warn motorists in advance and allow them adequate opportunity to divert prior to reaching the Closure, Stoppage or Detour Route location.
- (c) For each scheduled Full Closure, Lane Closure, Stoppage or Detour Route, the Design-Builder shall provide advance notice to the travelling public and other stakeholders of the scheduled Full Closure, Lane Closure, Stoppage or Detour Route in accordance with Schedule 9 [Communication and Engagement].
- (d) Temporary Works at intersections in the vicinity of exit Interchange Ramps shall be designed to prevent queuing onto Highway 91 and Highway 91C.
- (e) Existing signal co-ordination along Other Specified Roads and adjacent municipal roadways shall be maintained.

5.2 Restricted Periods for Other Specified Roads

Restricted Periods for Other Specified Roads are as follows:

Restricted Periods for Nordel Way (east of Highway 91) are as follows:

Direction	Weekdays	Saturday	Sunday
Eastbound	6:00am – 9:00pm	10:00am – 8:00pm	10:00am – 8:00pm
Westbound	5:00am – 8:00pm	8:00am – 8:00pm	10:00am – 7:00pm

Restricted Periods for Nordel Way (north of Highway 91C) are as follows:

Direction	Weekdays	Saturday	Sunday
Northbound	6:00am – 9:00pm	8:00am – 9:00pm	9:00am – 9:00pm
Southbound	6:00am – 8:00pm	7:00am – 8:00pm	9:00am – 8:00pm

Restricted Periods for 96th Street are as follows:

Direction	Weekdays	Saturday	Sunday
All	5:00am – 7:00pm	None	None

5.3 Lane Closures on Other Specified Roads

Except in circumstances in which Stoppages or Full Closures are permitted pursuant to Sections 5.4 [Stoppages on Other Specified Roads] and 5.5 [Full Closures on Other Specified Roads], respectively, of this Part, a minimum of one basic lane (excluding auxiliary lanes) in each direction shall be kept open for general traffic outside of Restricted Periods for Other Specified Roads.

5.4 Stoppages on Other Specified Roads

- (a) Subject to acceptance by the Province in accordance with the Consent Procedure, the following Stoppages may be permitted outside of Restricted Periods for Other Specified Roads:
 - (i) Stoppages of less than two minutes’ duration; and
 - (ii) Stoppages of greater than two minutes’ duration but less than 20 minutes’ duration between 11:00 pm and 4:30 am only.
- (b) After a Stoppage has been implemented and removed, the Design-Builder shall allow all queues to clear before implementing another Stoppage.
- (c) The aforementioned requirements are not applicable to random minor interruptions in traffic (i.e. not exceeding two minutes’ duration in each case) which may need to occur from time to time, including during Restricted Periods for Other Specified Roads. Such random minor interruptions shall be limited to no more than two per hour during Restricted Periods.

5.5 Full Closures on Other Specified Roads

Full Closures of Other Specified Roads are not permitted except:

- (a) with the approval of the Municipality; and
- (b) with the prior acceptance of the Province pursuant to the Consent Procedure.

5.6 Non-Permitted Traffic Disruption Events on Other Specified Roads

Each of the following Traffic Disruption Events occurring on an Other Specified Road is a Non-Permitted Traffic Disruption Event:

- (a) a Lane Closure occurring on an Other Specified Road;
 - (i) during a Restricted Period for Other Specified Roads; or

- (ii) in any other circumstances not expressly permitted pursuant to Section 5.3 [Lane Closures on Other Specified Roads] of this Part;
- (b) a Full Closure occurring on an Other Specified Road:
 - (i) during a Restricted Period for Other Specified Roads; or
 - (ii) in any other circumstances not expressly permitted pursuant to Section 5.5 [Full Closures on Other Specified Roads] of this Part; or
- (c) a Stoppage occurring on an Other Specified Road and not expressly permitted pursuant to Section 5.4 [Stoppages on Other Specified Roads] of this Part.

5.7 Detour Route and Lane Shift Design Criteria for Other Specified Roads

Table 5.7 summarizes the minimum geometric design criteria that shall be incorporated into the Design of all Detour Routes and Lane Shifts for all Other Specified Roads.

Table 5.7

Construction Detour Route and Lane Shift Design Criteria – Other Specified Roads			
	Other Specified Roads (Nordel Way north of Highway 91C)	Other Specified Roads (Nordel Way east of Highway 91)	Other Specified Roads (96 Street)
Design/Posted Speed	50 km/h or less	50 - 60 km/h	50 - 60 km/h
Design Vehicle	WB20	WB20	WB20
Maximum Grade	8%	8%	8%
Maximum Superelevation	6%	6%	6%
Minimum Radius	The lesser of 90 m or existing	The lesser of 130 m or existing	The lesser of 130 m or existing
Vertical Clearance	The lesser of 5.0 m or existing travel lane clearance	The lesser of 5.0 m or existing travel lane clearance	The lesser of 5.0 m or existing travel lane clearance
Lane Width	3.3 m travel lanes (min)	3.5 m travel lanes (min)	3.5 m travel lanes (min)
Outside Paved Shoulder Width (Open)	1.0 m (min) paved, plus 0.5 m (min) gravel	1.0 m (min) paved, plus 0.5 m (min) gravel	1.5 m (min) paved, plus 0.5 m (min) gravel
Outside Paved Shoulder Width (Closed by Barrier)	1.0 m (min)	1.0 m (min)	2.0 m (min)
Inside Paved Shoulder Width (Closed by Barrier)	0.5 m (min)	0.5 m (min)	0.5 m (min)
Side Slopes (w/o Barrier)	The lesser of 3:1 or existing	The lesser of 3:1 or existing	The lesser of 3:1 or existing
Pedestrian/cycle facilities	To match existing	To match existing	To match existing

Note: Minimum Shoulder widths shall be permitted except where dictated otherwise by sight distance requirements, in which case, widened Shoulder width in order to meet sight distance requirements shall be provided.

ARTICLE 6 RIVER ROAD

6.1 General Requirements

- (a) The requirements in this Article 6 are applicable to River Road east of 96th Street.
- (b) For each scheduled Detour Route, Full Closure, or Stoppage having a duration greater than five minutes, the Design-Builder shall provide advisory signage per direction of travel, and shall also provide signs to provide advance notification to the travelling public of all traffic pattern changes.
- (c) For each scheduled Full Closure or Stoppage having a duration greater than five minutes or Full Closure, the Design-Builder shall provide advance notification to the travelling public and other stakeholders of the scheduled Full Closure or Stoppage in accordance with Schedule 9 [Communication and Engagement].

6.2 Restricted Periods for River Road

Restricted Periods for River Road are as follows:

Direction	Weekdays	Saturday	Sunday
All	5:00am – 7:00pm	None	None

6.3 Lane Closures on River Road

Single lane alternating traffic operations along River Road may be permitted outside of Restricted Periods on a site specific basis with the approval of the Municipality and subject to the prior acceptance of the Province in accordance with the Consent Procedure.

6.4 Stoppages on River Road

- (a) Subject to acceptance by the Province in accordance with the Consent Procedure, the following Stoppages may be permitted outside of Restricted Periods for River Road:
 - (i) Stoppages of less than five minutes’ duration; and
 - (ii) Stoppages of greater than five minutes’ duration but less than 20 minutes duration between 9:00 pm and 5:00 am only.
- (b) After a Stoppage has been implemented and removed, the Design-Builder shall allow all queues to clear before implementing another Stoppage.
- (c) The aforementioned requirements are not applicable to random minor interruptions in traffic (i.e. not exceeding two minutes in duration in each case) which may need to occur from time to time, including during Restricted Periods for River Road.

6.5 Full Closures on River Road

- (a) Full Closures of River Road are not permitted except:

- (b) with the approval of the Municipality; and
- (c) provided that the Design-Builder has first obtained the approval of the Municipality, with the prior acceptance of the Province pursuant to the Consent Procedure.

6.6 Non-Permitted Traffic Disruption Events on River Road

Each of the following Traffic Disruption Events occurring on River Road is a Non-Permitted Traffic Disruption Event:

- (a) a Lane Closure during a Restricted Period for River Road; or
- (b) a Stoppage occurring on River Road in circumstances not expressly permitted pursuant to Section 6.4 [Stoppages on River Road] of this Part; or
- (c) a Full Closure occurring on River Road in circumstances not expressly permitted pursuant to Section 6.5 [Full Closures on River Road] of this Part.

6.7 Detour Route and Lane Shift Design Criteria for River Road

Table 6.7 provides the minimum geometric design criteria that shall be incorporated into the Design of all Detour Routes and Lane Shifts for River Road.

Table 6.7

Construction Detour Route and Lane Shift Design Criteria – River Road	
Design/Posted Speed	50 km/h or less
Design Vehicle	WB20
Maximum Grade	10%
Maximum Superelevation	6%
Minimum Radius	The lesser of 90 m or existing
Vertical Clearance	The lesser of 5.0 m or existing travel lane clearance
Lane Width	3.5 m travel lanes (min)
Outside Paved Shoulder Width (Open)	1.5 m (min) paved, plus 0.5 m (min) gravel
Outside Paved Shoulder Width (Closed by Barrier)	2.0 m (min)
Inside Paved Shoulder Width (Closed by Barrier)	N/A
Side Slopes (w/o Barrier)	The lesser of 3:1 or existing
Pedestrian/cycle facilities	To match existing

Note: Minimum Shoulder widths shall be permitted except where dictated otherwise by sight distance requirements, in which case widened Shoulder width in order to meet sight distance requirements shall be provided.

ARTICLE 7 TRAFFIC MANAGEMENT PLAN

7.1 General Requirements

- (a) Within 30 days following the Effective Date, the Design-Builder shall submit an initial Traffic Management Plan to the Province’s Representative pursuant to the Consent Procedure. Following the acceptance of the initial Traffic Management Plan by the Province’s

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Representative in accordance with the Consent Procedure, the Design-Builder shall submit all subsequent proposed changes to the Traffic Management Plan, including sub-plans, to the Province's Representative pursuant to the Consent Procedure.

- (b) The Traffic Management Plan and all updates thereto shall be consistent with and comply with all of the requirements set forth in this Part and all other relevant provisions of this Agreement.
- (c) The Design-Builder's Traffic Management Plan shall reference and interface with the Design-Builder's Traffic Quality Management Plan provided in accordance with Schedule 7 [Quality Management] and the Construction Communication Plan provided in accordance with Schedule 9 [Communication and Engagement].
- (d) In addition to the requirements set out in this Section, the Design-Builder shall not conduct any Construction that affects traffic without a current Traffic Management Plan that has also been accepted and sealed by the Design-Builder's Traffic Engineer.
- (e) This work has been assessed to be a Category 3 Project in accordance with the Traffic Management Manual. The Traffic Management Plan shall comply with the definitions and guidelines provided in the Traffic Management Manual.
- (f) The Design-Builder's Traffic Management Plan shall outline how general traffic, as well as the traffic generated by Project Work, is to be managed.
- (g) The following sub-plans for the Design-Builder's Traffic Management Plan are required:
 - (i) Traffic Control Plan;
 - (ii) Incident Management Plan;
 - (iii) Implementation Plan;
 - (iv) Traffic Communications Plan; and
 - (v) Risk Assessment Plan.
- (h) Starting on the Effective Date, the Design-Builder shall provide to the Province a schedule of proposed Closures for the upcoming three months and the schedule shall be updated and resubmitted to the Province on a monthly basis.

7.2 Traffic Management Sub-Plans

7.2.1 Traffic Control Plans

- (a) The Design-Builder shall prepare Project specific Traffic Control Plans in accordance with the Traffic Management Manual and other Reference Documents for all activities that affect traffic operations, including but not limited to:
 - (i) individual traffic management layouts;
 - (ii) each Construction stage; and

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- (iii) activation of newly constructed roads, interchanges and Structures.
- (b) The Design-Builder is assigned responsibility for, and shall at all times make provision for, traffic to pass throughout the Project Site in accordance with this Part as well as ensuring the convenience and safety of the public, vehicular, cycling and pedestrian traffic, and the workers on the Project Site, and the protection of the Project Work.
- (c) Any one or more of the advance warning areas, transition areas, buffer spaces, work areas and termination areas of the Traffic Control zone may be outside the Project Site, but this shall in no way diminish the Design-Builder's responsibility to meet the requirements of the Traffic Management Manual.
- (d) Construction signs, specific to an operation, shall be either removed or effectively covered so that their message is obscured whenever such operation is not in progress.
- (e) Further to the Category 3 Traffic Management Plan requirements in the Traffic Management Manual, the Design-Builder shall conduct traffic analysis on the Traffic Control Plan for each stage of the Construction where traffic operations are affected. The traffic analysis shall determine the effect of each Traffic Control Plan on the roadway capacity and operation, including the resulting vehicle delays and queue lengths. The analysis shall confirm that the resulting delays and queues are acceptable and are expected to clear before the commencement of a Restricted Period. The traffic analysis shall be conducted for proposed design speed and the representative hour(s) and day(s) that each Traffic Control Plan is in operation. Traffic analysis shall be included in the Traffic Control Plan submission.
- (f) The Design-Builder shall be responsible for including Construction generated traffic data in the Traffic Control Plan and any associated analysis.
- (g) The Design-Builder shall continuously measure the effectiveness of Traffic Control Plans and, if those measurements indicate a Traffic Control Plan is non-compliant, the Design-Builder shall immediately adjust the Traffic Control Plan to bring it into compliance.
- (h) The Traffic Control Plan shall include engineered designs for each Stoppage, Full Closure, Detour Route, Lane Shift and Lane Closure. The locations and details of all signs, PDMSs, Pavement Markings, barriers, and protective works shall be provided on the drawings. All drawings are to be signed/sealed by the Traffic Engineer.
- (i) The Traffic Control Plans and traffic analysis shall consider regional traffic, planned works by others on Highway 91C, Other Specified Roads and other Fraser River crossings in the region.
- (j) Storage lengths at existing signalized intersections shall not be reduced unless analysis confirms acceptable operation.
- (k) Acceleration/deceleration lane lengths shall not be reduced unless analysis confirms acceptable operation.

7.2.2 Incident Management Plan

- (a) The Design-Builder shall prepare and submit an Incident Management Plan in accordance with the Incident Management Plan requirements of the Traffic Management Manual, this Part and Sections 2.5(b), 2.5(c) and 6.3(b) of Schedule 9 [Communications and Engagement].
- (b) Should any unplanned events or incidents occur, the Design-Builder shall notify, in addition to the Road Authority as defined in the Traffic Management Manual, the Regional Transportation Management Centre regarding worker and public safety, traffic conditions, and actions taken to normalize traffic flow.
- (c) The Incident Management Plan shall specify how the Design-Builder will provide access for emergency vehicles and provide assistance to emergency response personnel.
- (d) The Design-Builder shall consult with emergency responders (including but not limited to Police, fire, ambulance, search and rescue, regional health authorities, area hospitals and municipal and regional emergency service providers) in developing the Incident Management Plan, and liaise closely with them throughout Construction.
- (e) The Incident Management Plan shall also address access via the Project Site for Incidents or emergencies external to the Project Site but for which emergency vehicles and response personnel require passage over the Project Site.
- (f) The Incident Management Plan shall include a description of how the Design-Builder proposes to address the following scenarios:
 - (i) an incident on Highway 91, Highway 17, Highway 99 or Highway 91C within the Project Site when Lane Closures are in place;
 - (ii) an incident on the George Massey Tunnel or other Highway 99 location when there are no Closures on Highway 91; and
 - (iii) an incident on the George Massey Tunnel or other Highway 99 location when Lane Closures are in place on Highway 91.

7.2.3 Implementation Plan

The Design-Builder shall prepare and submit an Implementation Plan in accordance with the Traffic Management Manual and Schedule 9 [Communications and Engagement]. This plan shall identify the Traffic Control Supervisor, Traffic Engineer and Traffic Manager, along with the qualifications and experience of those named individuals. This plan shall also define processes to ensure that the Traffic Control and Incident Management Plans are developed and implemented efficiently and appropriately, and that they are kept up-to-date with necessary modifications during Construction.

7.2.4 Traffic Communications Plan

- (a) The Design-Builder shall prepare and submit a Traffic Communications Plan in accordance with Section 4.1.8 of Schedule 9 [Communications and Engagement] and the Public Information Plan requirements of the Traffic Management Manual.

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- (b) As part of the Traffic Communications Plan, the Design-Builder shall prepare and implement an Advisory Signing Plan. The primary objective of the Advisory Signing Plan is to notify the travelling public in advance of the scheduled Construction, Detour Routes, Full Closures, Stoppages and Lane Closures.

7.2.5 Risk Assessment Plan

In accordance with the Traffic Management Manual, the Design-Builder shall perform an independent assessment to identify any risks or special conditions that must be addressed through the Design-Builder's Risk Assessment Plan. The Design-Builder shall identify all risks and state the measures to be implemented to manage or eliminate the risks.

ARTICLE 8 RESPONSIBILITIES FOR TRAFFIC MANAGEMENT PLAN

8.1 Design-Builder Responsibilities

The Design-Builder shall accept full responsibility for quality control and quality assurance of all activities affecting the Traffic Management Plan. The Traffic Management Plan quality control process shall be included in the Traffic Quality Management Plan. The Design-Builder shall ensure that all personnel identified in the Traffic Management Plan are suitably qualified and licensed.

8.2 Traffic Manager

The Design-Builder shall designate a Traffic Manager who shall be responsible for the following:

- (a) developing, implementing and managing the Traffic Management Plan;
- (b) ensuring the Province is kept informed of all upcoming traffic activities and any revisions to the Traffic Management Plan;
- (c) ensuring that appropriate modifications are made to the Traffic Management Plan if the specified traffic control measures are not achieving the desired effect; and
- (d) coordinating with adjacent work areas, including work being carried out by others;

8.3 Traffic Engineer

The Design-Builder shall designate a Professional Engineer as the Traffic Engineer, who has the Design-Builder's authority to review and seal the Traffic Management Plan and associated sub-plans and take responsibility for ensuring that all traffic engineering issues and requirements are taken into account.

The Traffic Engineer shall sign and seal all traffic engineering checklists and signal timing sheets.

8.4 Traffic Control Supervisors

- (a) The Design-Builder shall designate one or more Traffic Control Supervisors, each of whom shall have the Design-Builder's authority to respond to traffic control requirements and each of whom shall personally perform all the duties of the Traffic Control Supervisor, in accordance with this Part.

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- (b) Further to Section 194.04 of the DBSS, a Traffic Control Supervisor shall be on the Project Site full-time when active Construction is underway. The Traffic Control Supervisor shall have direct line authority over all of the Design-Builder's traffic control personnel and procedures on the Project Site. The Design-Builder shall not designate the Site Superintendent as the Traffic Control Supervisor. The Traffic Control Supervisor shall have no other duties.
- (c) The duties of the Traffic Control Supervisor shall include but not be limited to the following:
 - (i) Directing all traffic control operations on the Project Site and coordinating with other contractors for any adjacent construction or maintenance operation;
 - (ii) Liaising with the Province's Representative, as required;
 - (iii) Recording the actual duration of Lane Closures, Stoppages, Full Closures, Detour Routes and Lane Shifts and unauthorized traffic delays and forwarding this information, on a daily basis, to the Province for information;
 - (iv) Monitoring queue lengths in active Construction zones and implementing appropriate measures when such queues become excessive;
 - (v) Documenting Traffic Control measures and activities in accordance with this Part; and
 - (vi) Overseeing all requirements of the Agreement that contribute to the convenience, safety, and orderly movement of vehicular, cycling and pedestrian traffic.
- (d) Traffic control supervision shall be provided by the Traffic Control Supervisor on the Project Site on a 24 hours per day basis when active Construction is underway. During non-work periods, the Traffic Control Supervisor or accepted alternate shall be on the Project Site within 45 minutes of being notified. The Traffic Control Supervisor shall have appropriate personnel and equipment available on call, at all times.

8.5 Traffic Control Personnel

All traffic control personnel shall be qualified in accordance with Health and Safety Laws.

8.6 Temporary Traffic Control On-site Road Safety Audits

Temporary Traffic Control [Design and On-site] Road Safety Audits shall be carried out in accordance with Article 13 [Road Safety Audit] of Part 2 of this Schedule.

**APPENDIX A
DELIVERABLES FOR SUBSTANTIAL COMPLETION AND TOTAL COMPLETION**

PART I DELIVERABLES FOR SUBSTANTIAL COMPLETION

1. Records Documentation

- (a) Prior to Substantial Completion, the Design-Builder shall compile a complete set of Construction Records, including record drawings, for the New Project Infrastructure and submit the finalized Construction Records to the Province's Representative for record purposes.
- (b) Record drawings shall be provided in the following formats:
 - (i) one full set of original signed and sealed full size hard copies, in custom sized cardboard boxes with suitable sized folders and appropriate labels;
 - (ii) one full set of signed and sealed 11x17 hard copies, hole punched and placed in three ring binders;
 - (iii) two full sets of 11x17 hard copies, hole punched and placed in three ring binders;
 - (iv) three full sets of PDF drawings on separate USB sticks or similar;
 - (v) three full sets of DWG drawings on separate USB sticks or similar;
 - (v) one full set of signed and sealed drawings scanned onto microfiche, in microfiche boxes, and suitably labelled; and
 - (vi) one set of all drawings of New Project Infrastructure in the City of Delta, original signed and sealed 11x17 hard copies and one set of PDF and DWG drawings on a USB stick.
- (c) All Construction Records (including settlement monitoring and other information) compiled by the Design-Builder shall be available to the Province and the Owner's Engineer upon request.
- (d) The Design-Builder shall ensure that all changes to drawings are properly and completely identified for record purposes. The drawing numbers shall remain the same as the originals. All Construction Records shall be stand-alone documents drafted in the format and to the standards of the original Design drawings.

2. Evidence of Assignments and Transfers of Property and Warranties

The Design-Builder shall deliver the following to the Province, or at the discretion of the Province to BCTFA or other third party designated by the Province:

- (a) written confirmations or acknowledgements of:
 - (i) the assignment of Subcontractor warranties as required by Section 2.5 [Assignment of Warranties to Province] of Schedule 5; and

Appendix A: Deliverables for Substantial Completion and Total Completion

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- (ii) where not previously provided pursuant to Section 2.12(c), the transfer of any other assets required to be transferred prior to the Substantial Completion Date to the Province or any other person under the terms of this Agreement; and
- (b) copies of all materials comprising the Project Intellectual Property, and transfers, assignments and waivers in respect of same in accordance with the provisions of this Agreement.

3. Operations and Maintenance Manuals

Prior to Substantial Completion, the Design-Builder shall provide the Province any and all operation and maintenance manuals required in accordance with this Schedule 4, such manuals having been reviewed in advance in accordance with the Review Procedure.

4. Training and Orientation

Prior to Substantial Completion, the Design-Builder shall provide to the Province any and all training and orientation required to operate or maintain any special equipment or special Infrastructure implemented as part of the Project Facilities.

5. Spare Parts

Prior to Substantial Completion, the Design-Builder shall provide to the Province a minimum of one set of spare parts required for any special equipment or special Infrastructure implemented as part of the Project Facilities.

6. Cleaning

The Design-Builder shall:

- (a) remove all surplus material, equipment, sanitary facilities and any other Construction Plant, and all waste, material, debris, and rubbish from the Project Site;
- (b) remove all temporary fences and roads from the Project Site; and
- (c) leave the Project Work, the Project Site and the Project Infrastructure to the extent that such infrastructure has been constructed, installed, altered, upgraded, and/or augmented by the carrying out of the Project Work in a safe and orderly condition, including by ensuring that such areas have been returned to their original condition, as applicable, or are 'broom clean' and graded to an even clean surface.
- (d) flush clean all drainage systems on or in respect of any Project Infrastructure; and
- (e) remove all graffiti from the Project Infrastructure.

7. Keys, Codes and Passwords

The Design-Builder shall:

Appendix A: Deliverables for Substantial Completion and Total Completion

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- (a) in respect of all locks, supply and install permanent cores;
- (b) deliver the following keys to the Province or a third party designated by the Province:
 - (i) the permanents keys to all permanent cores installed under paragraph (a) above;
 - (ii) the keys to all traffic sign housings;
 - (iii) the lifting keys for all types of chamber covers; and
 - (iv) all other keys to all buildings forming part of the Project Infrastructure; and
- (c) deliver the codes and passwords to all computers and computerized systems installed as part of the Project Work, control of which is required to be transferred to the Province or a third party designated by the Province.

PART II DELIVERABLES FOR TOTAL COMPLETION

1. Asset Inventory Data

- (a) Prior to Total Completion, the Design-Builder shall collect and provide asset inventory data for the Province’s electronic asset inventory records for all New Project Infrastructure. Such asset inventory data shall be provided for the following Province corporate asset inventory systems:

Province System	Inventory
Bridge Management Information System (BMIS)	<ul style="list-style-type: none"> • Structures – Bridges, Major Retaining Walls, Major Culverts, Tunnels, and Major Sign Structures.
Roadway Pavement Management Systems (RPMS)	<ul style="list-style-type: none"> • Pavements – including but not limited to Travelled Lanes, Shoulders, medians, rest area parking, and other areas specified to be treated to adjacent highway standard. The Shoulder and surface type are also recorded in CHRIS.
Corporate Highway and Resource Information System (CHRIS)	<ul style="list-style-type: none"> • Other Structures – including but not limited to retaining walls less than 2.0m high, minor culverts; • Other drainage appliances – including but not limited to curb and gutter, catch basins, flumes, and manholes; • Signs – including but not limited to regulatory, warning, guide, informational, advisory, construction and maintenance, and route markers, but excluding electronically controlled messages/displays; • Pavement markings – including but not limited to longitudinal, transverse and intersection markings, thermoplastic markings and HRPm; • Other inventory – including but not limited to walls, fences, gates, guardrails and reflectors, and linear safety features.

Appendix A: Deliverables for Substantial Completion and Total Completion

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- (b) Inventory data collected shall be in the format prescribed in the applicable Province manual for the relevant provincial system.
- (c) The Design-Builder shall provide all additions and amendments to the asset inventory for RPMS and CHRIS electronically to the Province's Representative to upload into the corporate asset inventory system. The file(s) shall be compatible with the software used by the Province for managing the asset inventory.
- (d) For BMIS, the Design-Builder shall provide inventory data to the Province's Representative to enter into the BMIS electronic program. The information supplied shall be generated in accordance with the definitions utilized within the BMIS. Clearance data, general arrangement data and Structure location information shall be provided to the Province's Representative to be input into BMIS 30 days prior to opening the Structure to public vehicle use. All remaining inventory data is to be provided to the Province's Representative for input into BMIS within 12 months and in any event prior to Total Completion of such Structure.
- (e) The Design-Builder shall provide the Province with a complete list of all electrical inventory in electronic and hard copy.
- (f) Unless specified otherwise, electronic files shall be compatible with the most recent version of either Microsoft Office or Adobe Acrobat Reader, and all supplied electronic files shall be on a USB data storage device and be clearly labelled as to the content.
- (g) The actual extent of data fields requiring populating, particularly for asset inventory being entered into CHRIS, shall be by agreement between the Design-Builder and the Province's Representative.

APPENDIX B
PROVINCE PERMITS

1. Environmental Assessment Certificate
2. CEAA Screening Report and Decision Letter
3. ALC Resolution
4. Abandonment of Approval 106335
5. Permit 2018-0218 issued June 20, 2018 under Section 14 of the *Heritage Conservation Act* (British Columbia)
6. Permit to be issued under Section 12 of the *Heritage Conservation Act* (British Columbia) as applied for by the Province in the Application for Alteration Permit dated April 2, 2019 covering Archaeology Site DgRr-86.

APPENDIX C
FORM OF CERTIFICATES

1. Design Certificate (General)
2. Design Certificate (Independent Check for Category III Structures)
3. Design Certificate (Environmental)
4. Road Safety Audit Certificate (Stage 1)
5. Road Safety Audit Certificate (Stage 2)
6. Road Safety Audit Certificate (Stage 3)
7. Construction Certificate
8. Certificate of Substantial Completion
9. Certificate of Total Completion
10. Assessment Certificate (Structures)

Certificate Form 1

Certificate Ref No. []

DESIGN CERTIFICATE (GENERAL)

In respect of :..... (Provide details e.g. Highways/Geotechnical/Traffic Operations Modelling/Landscape etc.)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for certifying the Design in accordance with Part 3 of Schedule 4 to the 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 Agreement and all relevant Project Requirements.

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 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 Project Requirements, as amended by the following:
[List, if any, the changes made by the issue of Change Certificates];
 - (ii) complies with all applicable design requirements of the Agreement;
 - (iii) complies with all applicable standards, codes and current Good Industry Practice; and
 - (iv) accurately describes and depicts the work to be undertaken.

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SCHEDULE

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

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

2. This Certificate is:
- i. received*
 - ii. received with comments as follows*
 - iii. returned marked "comments" as follows:*
- * delete as appropriate

Signed:
Province's Representative
Name:
Date:

Certificate Form 2

Certificate Ref. No []

DESIGN CERTIFICATE (INDEPENDENT CHECK FOR CATEGORY III STRUCTURES)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of certificate to be used by the Checking Team for certifying the design of Category III Structures incorporated in the Project Work, in accordance with Part 3 of Schedule 4 to the 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 Agreement.
2. We certify that we have performed an independent check (as required in the Agreement for Category III 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 annexed in accordance with all applicable requirements contained in the Design Management Plan and 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 such an independent check, and that in our professional opinion:
 - i. the said Design Data meets performance expectations outlined in the Agreement, **[including Technical Appraisal Form]** No. [.....] dated [.....], as amended by the following:

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

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SCHEDULE

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

Signed:
Checking Team (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

2. This Certificate is:
- i. received*
 - ii. received with comments as follows*
 - iii. returned marked "comments" as follows:*
- * delete as appropriate

Signed:
Province's Representative
Name:
Date:

Certificate Form 3

Certificate Ref No. []

DESIGN CERTIFICATE (ENVIRONMENTAL)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of certificate to be used by the Designer for certifying the design of environmental works incorporated in the Project Work, in accordance with Part 3 of Schedule 4 to the 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 Agreement and all relevant Project Requirements.
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 and annexed in accordance with all applicable requirements contained in the Design Management Plan and 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:
 - i. the said Design Data complies with all applicable Project Requirements, including Technical Appraisal Form No. [.....] dated [.....], as amended by the following:
[List, if any, the changes made by the issue of Change Certificates, and any Addenda to the foregoing Technical Appraisal Form];
 - ii. the said Design Data complies with all applicable design requirements of the Agreement; and
 - iii. the said Design Data complies with all applicable standards, codes and current Good Industry Practice.

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SCHEDULE

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

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Environmental Director
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

2. This Certificate is:
- i. received*
 - ii. received with comments as follows*
 - iii. returned marked "comments" as follows:*
- * delete as appropriate

Signed:
Province's Representative
Name:
Date:

Certificate Form 4

Certificate Ref No. []

ROAD SAFETY AUDIT CERTIFICATE (STAGE 1)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for certifying that a Stage 1 Road Safety Audit has been carried out in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement.

1. We certify that the preliminary design of [.....] has been the subject of a Stage 1 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement.
2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

3. We certify that the preliminary design of [.....] has been the subject of a Stage 1 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement and that all observations and recommendations in the Audit Team’s report have been satisfactorily addressed and resolved.

Signed:
Design-Builder (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

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Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

4. Receipt of this Certificate is acknowledged.

Signed.....
Province's Representative
Name.....
Date.....

Certificate Form 5

Certificate Ref. No. []

ROAD SAFETY AUDIT CERTIFICATE (STAGE 2)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for certifying that a Stage 2 Road Safety Audit has been carried out in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement.

1. We certify that the Detailed Design of [.....] has been the subject of a Stage 2 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement.

2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

3. We certify that the Detailed Design of [.....] has been the subject of a Stage 2 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement and that all observations and recommendations in the Audit Team’s report have been satisfactorily addressed and resolved.

Signed:
Design-Builder (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

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Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

4. Receipt of this Certificate is acknowledged.

Signed.....
Province's Representative
Name.....
Date.....

Certificate Form 6

Certificate Ref. No. []

ROAD SAFETY AUDIT CERTIFICATE (STAGE 3)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for certifying that a Stage 3 Road Safety Audit has been carried out in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement.

1. We certify that the [reference relevant works] as constructed, tested and commissioned has been the subject a Stage 3 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement.
2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

3. We certify that the [reference relevant works] as constructed, tested and commissioned has been the subject of a Stage 3 Road Safety Audit in accordance with Article 13 of Part 2 of Schedule 4 to the Agreement, the Design Management Plan, the Design Quality Management Plan and all other relevant provisions of the Agreement and that all observations and recommendations in the Audit Team’s report have been satisfactorily addressed and resolved.

Signed:
Design-Builder (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

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Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

4. Receipt of this Certificate is acknowledged.

Signed.....
Province's Representative
Name.....
Date.....

Certificate Form 7

Certificate Ref. No. []

CONSTRUCTION CERTIFICATE

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer and the Design-Builder for certifying the Substantial Completion or Total Completion of Construction of the Project Work in accordance with Part 3 of Schedule 4 to the Agreement.

Design-Builder’s Statement

1. We certify that **[name and element of construction]** has been designed, constructed, [Substantially Completed] [Totally Completed], commissioned and tested in all respects in accordance with:
 - (i) the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure; and
 - (ii) the provisions of the Agreement including all applicable Project Requirements [as amended by the following Minor Works, Province Changes and Value Engineering Proposals: [.....]].

Signed.....
Design-Builder (Principal)
Name.....
Title.....
Date.....
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder’s Representative
Name:
Date:

Designer’s Statement

2. We certify that we have examined the **[name and element of construction]** in accordance with the requirements for examination of the Project Work contained in the Design Management Plan, 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 Project Work or other works has been designed,

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constructed, [Substantially Completed] [Totally Completed], commissioned and tested in all respects in accordance with:

- (i) the relevant Design Data and Design Certificates in each case to which there has been no objection under the Review Procedure; and
- (ii) the provisions of the Agreement including all applicable Project Requirements [as amended by the Minor Works, Province Changes and Value Engineering Proposals listed in paragraph 1 above].

Signed.....
Designer (Principal)
Name.....
Title.....
Date.....
Professional Registration Number:
Affix Professional Seal

3. Receipt of this Certificate is acknowledged.

Signed.....
Owner's Engineer
Name.....
Date.....
Professional Registration Number:
Affix Professional Seal

Certificate Form 8

Certificate Ref No. []

CERTIFICATE OF SUBSTANTIAL COMPLETION

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate of Substantial Completion to be used by the Owner’s Engineer in accordance with Part 3 of Schedule 4 to the Agreement.

1. Confirmation was given on [date] by the Design-Builder that the New Project Infrastructure has been Substantially Completed in accordance with the Agreement and that all conditions to achievement of Substantial Completion as set out in the Agreement have been met.
2. A Road Safety Audit Certificate (Stage 3) was issued on [date].
3. Construction Certificates for the Substantial Completion of the New Project Infrastructure were issued on [dates].
4. This document shall serve as the Certificate of Substantial Completion.
5. The Final Deficiency List signed by the Owner’s Engineer is appended.
6. The Substantial Completion Date shall be [date].

Signed.....
Owner’s Engineer
Name.....
Title.....
Date.....
Professional Registration Number:
Affix Professional Seal

Certificate Form 9

Certificate Ref. No. []

CERTIFICATE OF TOTAL COMPLETION

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate of Total Completion to be used by the Owner’s Engineer in accordance with Part 3 of Schedule 4 to the Agreement.

1. Confirmation was given on [date] by the Design-Builder that Total Completion has been achieved in accordance with the Agreement.
2. Construction Certificates for the Total Completion of the New Project Infrastructure were issued on [dates].
3. This document shall serve as the Certificate of Total Completion.
4. The Total Completion Date shall be [date].

Signed:
Owner’s Engineer
Name:
Title.....
Date.....
Professional Registration Number:
Affix Professional Seal

Certificate Form 10

Certificate Ref. No. []

ASSESSMENT CERTIFICATE (STRUCTURES)

Agreement between Her Majesty the Queen in right of the Province of British Columbia, BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership dated December 13, 2019 (“the Agreement”) relating to the Project. Defined terms and expressions used in the Agreement have the same meanings in this Certificate.

1. We certify that in assessing [.....] **[Name and Category of the Structure and list of all elements of the Structure included in the assessment]** listed in the Schedule hereto and annexed we have complied with all applicable requirements contained in the Design Management Plan, the Design Quality Management Plan and the Construction Quality Management Plan and have utilized the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking such assessments, and that in our professional opinion:

i the said assessment complies with all applicable Project Requirements, including Technical Appraisal Form No. [.....] dated [.....], as amended by the following:

[List, if any, the changes made by the issue of Change Certificates and addenda to the foregoing Technical Appraisal Form];

and the said assessment complies in all other respects with the Agreement; and

ii the assessed capacity of each element of the Structure is as follows:

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 4: DESIGN AND CONSTRUCTION
Appendix C: Form of Certificates

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SCHEDULE

[Include here drawing numbers and title used for the assessment.]

Signed.....
Designer (Principal)
Name.....
Title.....
Date.....
Professional Registration Number:
Affix Professional Seal

Signed:
Design-Builder's Representative
Name:
Date:

2. This Certificate is:
- i. received *
 - ii. received with comments as follows*
 - iii. returned marked "comments" as follows:*
- * delete as appropriate

Signed:
Province's Representative
Name:
Title:
Date:

**APPENDIX D
SAMPLE CONTENTS FOR A STRUCTURAL TAF**

Ref. No.....

- 1. NAME OF PROJECT.....**
 - 1.1 Type of highway
 - 1.2 Permitted traffic speed (for a Bridge give over and/or under).
- 2. NAME OF STRUCTURE (for example).....**
 - 2.1 Obstacles crossed.
- 3. PROPOSED STRUCTURE**
 - 3.1 Description of Structure.
 - 3.2 Structural type) Include reasons
 - 3.3 Foundation type) for choice
 - 3.4 Span arrangements)
 - 3.5 Articulation arrangements.
 - 3.6 Parapet type.
 - 3.7 Proposed arrangements for inspection and maintenance.
 - 3.8 Materials and finishes.
- 4. DESIGN/ASSESSMENT CRITERIA**
 - 4.1 Live Loading, Headroom.
 - 4.1.1 BC Bridge Code loading:
 - 4.1.2 Design Vehicle.....
 - 4.1.3 Footway or footbridge live loading.
 - 4.1.4 Provision for exceptional abnormal loads.
 - 4.1.4.1 Gross weight tonnes on vehicle no.m.
 - 4.1.4.2 Axle load and spacing.
 - 4.1.4.3 Air cushion tonnes over m xm.
 - 4.1.4.4 Location of vehicle track on deck cross-section.

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- 4.1.5 Any special loading not covered above.
- 4.1.6 MOT heavy or high load route requirements and arrangements being made to preserve the route.
- 4.1.7 Authorities consulted and any special conditions required.

4.2 List of relevant design documents.

4.3 Proposed Alternative Proposals.

5. STRUCTURAL ANALYSIS

- 5.1 Methods of analysis proposed for superstructure, substructure and Foundations.
- 5.2 Description and diagram of idealised structure to be used for analysis.
- 5.3 Assumptions intended for calculation of structural element stiffness.
- 5.4 Proposed earth pressure coefficients (k_a , k_o , or k_p) to be used in design of earth retaining elements.

6. SEISMIC DESIGN

- 6.1 Seismic design inputs.
- 6.2 Load paths.
- 6.3 Identification of capacity protected members and hinge locations.
- 6.4 Special devices such as dampers or bearings.

7. SEISMIC INSTRUMENTATION

- 7.1 Proposed layout of seismic instrumentation.

8. GROUND CONDITIONS

- 8.1 Acceptance of interpretative recommendations of the soils report to be used in the design and reasons for any proposed departures.
- 8.2 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.
- 8.3 Differential settlement to be allowed for in design of structure.

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- 8.4 Anticipated ground movements or settlement due to embankment loading, mineral extraction, flowing water, and measures proposed to deal with these defects as far as they affect the structure.
- 8.5 Results of tests of ground water (e.g. pH value, chloride or sulphate content) and any counteracting measures proposed.
- 8.6 Anticipated ground movements or settlement due to seismic loading, measures proposed to deal with these impacts as far as they affect the structure.

9. CHECKING

- 9.1 Name of proposed Checking Team.

10. DRAWINGS AND DOCUMENTS

- 10.1 List of drawings (including numbers) and documents accompanying the submission. To include (without limitation):
 - 10.1.1 a location plan;
 - 10.1.2 a preliminary general arrangement drawing; and
 - 10.1.3 relevant parts of the ground investigation report.

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

For permanent works:

Signed:
Designer (Principal)
Name:
Engineering Qualifications:.....
Date:
Professional Registration Number:
Affix Professional Seal

Signed:.....
Design-Builder's Representative
Name:.....
Date:.....

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 4: DESIGN AND CONSTRUCTION
Appendix D: Sample Contents for a Structural TAF**

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For Temporary Works:

Signed:
Designer (Principal) or designer (Principal), as applicable
Name:
Engineering Qualifications:.....
Date:
Professional Registration Number:
Affix Professional Seal

Signed:.....
Design-Builder (Principal)
Name:.....
Date:.....

Signed:.....
Design-Builder's Representative
Name:.....
Date:.....

12. THE ABOVE TAF IS:

- i. received*
 - ii. received with comments as follows:*
 - iii. returned marked "comments" as follows:*
- *delete as appropriate.

Signed:.....
Province's Representative
Name:
Date

**SCHEDULE 5
PROJECT WORK DEFECTS AND WARRANTIES**

PART 1 PROJECT WORK DEFECTS..... 1

1.1 Representation, Warranty and Covenant as to Project Work..... 1

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2.2 Latent Project Work Defect Warranty 2

2.3 Correction of Project Work Defects 2

2.4 Terms of Subcontractor Warranties 3

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PART 3 HOLDBACKS 5

3.1 Deficiency Holdback 5

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**PART 1
PROJECT WORK DEFECTS**

1.1 Representation, Warranty and Covenant as to Project Work

The Design-Builder represents and warrants to and covenants with the Province that:

- (a) all Design and Construction and Project Work provided, performed or carried out by or on behalf of the Design-Builder pursuant to this Agreement and (to the extent constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work or to the extent, in order to comply with its obligations under this Agreement, any component thereof ought to have been constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work) all Project Infrastructure shall conform to, comply with and satisfy all of the requirements of this Agreement, Good Industry Practice and all professional engineering principles generally accepted as standards of the industry in the Province of British Columbia;
- (b) the Project Work and (to the extent constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work or to the extent, in order to comply with its obligations under this Agreement, any component thereof ought to have been constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work) the Project Infrastructure shall be free of defects; and
- (c) all materials furnished under this Agreement shall be of good quality and fit for the intended purpose.

1.2 Project Work Defects

- (a) Any defect which the Design-Builder is obligated to repair and remediate pursuant to this Agreement and any deficiency, defect or error in the Project Work or (to the extent constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work or to the extent, in order to comply with its obligations under this Agreement, any component thereof ought to have been constructed, installed, altered, upgraded or augmented by the carrying out of the Project Work) the Project Infrastructure or non-compliance with the requirements of this Agreement (including the representations, warranties and covenants in Section 1.1 [Representation, Warranty and Covenant as to Project Work] of this Schedule) shall be referred to as a “**Project Work Defect**”.
- (b) For certainty, Latent Project Work Defects, shall be Project Work Defects.

**PART 2
WARRANTIES**

2.1 Project Work Defect Warranty

Without limiting or derogating from the other warranty obligations of the Design-Builder contained in this Agreement (including this Schedule), the Design-Builder, at its own cost and expense (but without prejudice to the Province’s obligations under Section 3.1(d) of this Schedule), shall correct to the satisfaction of the Province, acting reasonably, as required by and in accordance with Section 2.3 [Correction of Project Work Defects] of this Schedule, all Project Work Defects arising during the General Project Work Defect Warranty Period.

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2.2 Latent Project Work Defect Warranty

- (a) At least three months prior to the end of the General Project Work Defect Warranty Period, the Province and the Design-Builder shall conduct a joint inspection of all of the Project Work to identify all Project Work Defects which are identifiable on visible inspection and in order to compile a list of any such Project Work Defects, which shall be corrected by the Design-Builder in accordance with Section 2.3 [Correction of Project Work Defects] of this Schedule. The Design-Builder shall prepare and submit such list to the Province's Representative, pursuant to the Consent Procedure, within 10 Business Days following the completion of such joint inspection.
- (b) Without limiting or derogating from the other warranty obligations of the Design-Builder contained in this Agreement, the Design-Builder, at its own cost and expense shall correct to the satisfaction of the Province, acting reasonably, as required by and in accordance with Section 2.3 [Correction of Project Work Defects] of this Schedule, any and all Project Work Defects which were not identified, and could not reasonably have been identified in accordance with Good Industry Practice, during the inspection contemplated by Section 2.2(a) of this Schedule (each a "**Latent Project Work Defect**"), provided that the Province gives the Design-Builder written notice of each Latent Project Work Defect within the period from the expiry of the General Project Work Defect Warranty Period to and including the fifth anniversary of the expiry of the General Project Work Defect Warranty Period or, if earlier, the fifth anniversary of the Termination Date.
- (c) The Province will use all reasonable efforts to provide notice of a Latent Project Work Defect to the Design-Builder within a reasonable period of time following the Province becoming aware of such Latent Project Work Defect, provided that no delay by the Province in providing such notice shall relieve the Design-Builder of its obligation to remedy such Latent Project Work Defect in accordance with Section 2.3 [Correction of Project Work Defects] of this Schedule.

2.3 Correction of Project Work Defects

- (a) As soon as reasonably practicable, and in any event within ten Business Days after the earlier to occur of the Design-Builder becoming aware of a Project Work Defect required to be corrected pursuant to Section 2.1 [Project Work Defect Warranty] or Section 2.2 [Latent Project Work Defect Warranty] of this Schedule and receipt by the Design-Builder of written notice from the Province specifying such a Project Work Defect, the Design-Builder shall propose when and how the Design-Builder shall remedy such Project Work Defect, which proposal shall be to the satisfaction of the Province, acting reasonably, provided that, in case of an Emergency requiring immediate corrective action, the provisions of Section 11.4 [Province's Emergency Rights] shall apply.
- (b) If the Design-Builder becomes aware of a Project Work Defect of which it has not been previously been notified by the Province, the Design-Builder shall notify the Province thereof in writing within five Business Days.
- (c) If the Design-Builder does not correct a Project Work Defect in accordance with Section 2.3(a) of this Schedule within the agreed time, or should the Design-Builder fail to provide a proposal within the ten Business Day period referred to in Section 2.3(a) of this

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Schedule or fail to provide a proposal satisfactory to the Province in accordance with Section 2.3(a) of this Schedule, or should the Province disapprove of the actions being taken by the Design-Builder in the case of emergency conditions, notwithstanding anything to the contrary contained in this Agreement and without limiting the rights of the Province pursuant to Part 11 [Province's Access, Monitoring and Step-In Rights], the Province may, upon five Business Days' written notice to the Design-Builder, perform some or all of the remedial Project Work required to correct or eliminate such Project Work Defect, either through its own forces or through the use of contractors designated by the Province, in which case all reasonable direct costs incurred by the Province (including costs of the Province's own personnel, materials and services) in remedying such Project Work Defect shall be payable on demand by the Design-Builder to the Province, provided that:

- (i) if, prior to the expiry of the General Project Work Defect Warranty Period, the Design-Builder fails on demand either to pay any such costs to the Province or satisfy any Claim made by the Province pursuant to Section 9.1 (including Section 9.1(d)(viii)) in respect of a Project Work Defect, the Province shall be entitled to discharge the relevant claim for such costs by applying an amount from the Warranty Holdback (whether, in accordance with this Agreement, retained from the Progress Payments in accordance with Schedule 10 [Payment and Performance Mechanism] or taken into account in the calculation of any termination sum in accordance with Schedule 13 [Compensation on Termination]), up to an amount in aggregate equal to the amount of such costs or the relevant Claim; and
 - (ii) the Design-Builder's obligation to pay such costs or indemnify the Province, as the case may be, shall only be discharged to the extent of the amount so applied and/or demanded by the Province.
- (d) If, at the expiry of the General Project Work Defect Warranty Period, any Project Work Defect that has been identified by the Province has not been corrected by the Design-Builder in accordance with this Section 2.3 (other than any Project Work Defect in respect of which the Province has applied an amount from the Warranty Holdback in accordance with Section 2.3(c)) of this Schedule, then the Province shall be entitled to retain from the Warranty Holdback (whether, in accordance with this Agreement, retained from the Progress Payments in accordance with Schedule 10 [Payment and Performance Mechanism] or taken into account in the calculation of any termination sum in accordance with Schedule 13 [Compensation on Termination]) up to an amount in aggregate equal to 200% of the Province's estimate of the costs for remedying each such Project Work Defect, provided that, following the correction of any such Project Work Defect by the Province, the Province shall pay (without interest) to the Design-Builder the excess (if any) of the amount so retained or demanded over the actual costs incurred by the Province in remedying such Project Work Defect.

2.4 Terms of Subcontractor Warranties

Without limiting or derogating from any warranty obligations of the Design-Builder contained in this Agreement, but subject to any express terms or conditions agreed by the Province, in its discretion, the Design-Builder shall:

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- (a) ensure that all Material Subcontracts contain provisions which:
 - (i) impose on the relevant Material Subcontractor the same warranties as are contained in this Agreement in relation to all Design and Construction and Project Work provided, performed or carried out and materials supplied by such Material Subcontractor; and
 - (ii) acknowledge that such warranties are for the benefit of the Province and its assignees as well as the Design-Builder or, as the case may be, the Material Subcontractor that is the beneficiary of any warranties contained in the relevant Material Subcontract and are assignable in accordance with the terms of this Agreement;
- (b) obtain or cause to be obtained any industry standard warranties which may be available which exceed the requirements of this Section 2.4 of this Schedule (including in respect of the term of such warranties), including against defects in materials and workmanship from each Subcontractor in respect of Design and Construction and Project Work provided, performed or carried out and materials and Equipment supplied by that Subcontractor under its Subcontract; and
- (c) at the request of the Province, cooperate with and assist the Province in the enforcement of any claims under warranties contained in any Subcontract or otherwise given by a Subcontractor.

2.5 Assignment of Warranties to Province

- (a) The Design-Builder:
 - (i) hereby absolutely assigns, on the terms set out in Section 2.5(b) of this Schedule, to the Province all warranties contained in any Subcontract to which the Design-Builder is a party; and
 - (ii) shall cause, by ensuring that relevant Subcontractors include relevant provisions in all Subcontracts to which the Design-Builder is not a party, all warranties contained in any such Subcontract to be absolutely assigned to the Province, on the terms set out in Section 2.5(b) of this Schedule.
- (b) Notwithstanding the provisions of Sections 2.5(a)(i) and (ii) of this Schedule, the Design-Builder or the Subcontractor that is the beneficiary of any warranties contained in the relevant Subcontract shall be permitted to enjoy the benefit of and enforce the warranties referred to in, respectively, Sections 2.5(a)(i) and (ii) of this Schedule as if the assignment made in Section 2.5(a)(i) of this Schedule and any assignments made pursuant to Section 2.5(a)(ii) of this Schedule had not been made until the earlier of (i) the date on which the Province gives the Design-Builder or the relevant Subcontractor a written notice stating that a Design-Builder Default has occurred and that the Province is exercising its rights pursuant to the relevant assignment, (ii) the Termination Date, and (iii) the end of the Term.
- (c) Without limiting the provisions of Section 18.7 [Further Assurance], the Design-Builder shall:

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- (i) cause to be included in any Subcontract to which it is a party a notice from the Design-Builder to the relevant Subcontractor of the assignment made in Section 2.5(a)(i) of this Schedule and an acknowledgment of such notice from the relevant Subcontractor; and
- (ii) cause to be included in any Subcontract to which it is not a party a notice from the Subcontractor that is the beneficiary of any warranties contained in the relevant Subcontract to the Subcontractor that is the provider of such warranties of the assignment made pursuant to Section 2.5(a)(ii) of this Schedule and an acknowledgment of such notice from the Subcontractor that is the provider of such warranties.

2.6 Survival

Notwithstanding any other provision of this Agreement, the provisions of this Part 2, together with Sections 3.2(b) and (c) of this Schedule, will survive the expiry or any earlier termination of this Agreement.

PART 3 **HOLDBACKS**

3.1 Deficiency Holdback

- (a) Notwithstanding any other provision of this Agreement, and in addition to any other holdbacks provided for in this Agreement, the Province may retain from the Progress Payments in accordance with Schedule 10 [Payment and Performance Mechanism] an amount equal to 200% of the Agreed Remedy Cost of each Final Deficiency List Deficiency (the “**Deficiency Holdback**”).
- (b) Following the end of each complete calendar month (commencing with the first complete calendar month) after the Substantial Completion Date has occurred, the Design-Builder shall prepare, and deliver to the Province’s Representative, a Payment Application in the applicable form set out in Appendix E [Payment Application Forms] to Schedule 10 and accompanied by the documentation specified therein, requesting payment of any amounts retained by the Province for the Deficiency Holdback pursuant to Section 3.1(a) of this Schedule in respect of any Final Deficiency List Deficiency that have been remedied, to the satisfaction of the Province, acting reasonably, during such month (or, in the case of the first such application, since the date of Substantial Completion).
- (c) By no later than the tenth Business Day following receipt of any Payment Application pursuant to Section 3.1(b) of this Schedule, the Province shall, subject to Section 3.1(e) of this Schedule, make payment, without interest, to the Design-Builder of the applicable amount(s).
- (d) If the Total Completion Date does not occur on or before the Total Completion Target Date, the Province may, in its discretion, do either of the following for each Final Deficiency List Deficiency that as at the Total Completion Target Date has not been remedied:
 - (i) without prejudice to Section 3.1(b) of this Schedule:

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- (A) the Province shall be entitled irrevocably to retain any amounts not paid to the Design-Builder in accordance with Section 3.1(b) of this Schedule in respect of such Final Deficiency List Deficiency; and
 - (B) in consideration for the making of such retention, the Design-Builder shall be released from its obligation to remedy such Final Deficiency List Deficiency; or
- (ii) require the Design-Builder to continue to remedy such Final Deficiency List Deficiency.
- (e) If this Agreement is terminated after any amounts have been retained pursuant to Section 3.1(a) of this Schedule but prior to the Total Completion Date, the Province shall be entitled irrevocably to retain any such amounts retained pursuant to Section 3.1(a) of this Schedule and not paid to the Design-Builder in accordance with Section 3.1(b) of this Schedule.

3.2 Warranty Holdback

- (a) Notwithstanding any other provision of this Agreement, and in addition to any other holdbacks provided for in this Agreement, the Province may retain from the Progress Payments in accordance with Schedule 10 [Payment and Performance Mechanism] an amount equal to 1% of the Contract Price (the “**Warranty Holdback**”).
- (b) Following the expiry of the General Project Work Defect Warranty Period, the Design-Builder shall prepare, and deliver to the Province’s Representative, a Payment Application in the applicable form set out in Appendix E [Payment Application Forms] to Schedule 10 requesting payment of the Warranty Holdback (less any amounts applied therefrom by the Province in accordance with any of Sections 2.3(c) and/or 2.3(d) of this Schedule).
- (c) By not later than the tenth Business Day following receipt of the Payment Application pursuant to Section 3.2(b) of this Schedule, the Province shall make payment, without interest, to the Design-Builder of the Warranty Holdback (less any amounts applied therefrom by the Province in accordance with any of Sections 2.3(c) and/or 2.3(d) of this Schedule).

**SCHEDULE 6
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PART 1
GENERAL PROVISIONS

1.1 Environmental Reference Documents

The Design-Builder shall ensure that the Project Work at all times complies with all guidelines, policies or practices of an environmental nature applicable to the Project and the Project Work, including but not limited to each of the following Reference Documents:

- (a) Air Emissions – Environment and Climate Change Canada Best Practices for Emission Reduction;
- (b) Amphibian and Reptile BMPs;
- (c) Archaeological Handbook;
- (d) Archaeological Impact Assessment Guidelines;
- (e) BC Ambient Air Quality Objectives;
- (f) Canada-wide Standards for Particulate Matter and Ozone;
- (g) CMT Handbook;
- (h) DBSS 165 *Protection of the Environment*;
- (i) Develop with Care;
- (j) DFO Fisheries Protection Policy Statement;
- (k) DFO Measures to Avoid Causing Harm to Fish and Fish Habitat;
- (l) Heavy Metal Memorandum of Understanding;
- (m) Highway Maintenance Activities BMPs;
- (n) Instream Works - Standards and Best Practices;
- (o) Instream Work Windows;
- (p) Land Development Guidelines;
- (q) Manual of Control of Erosion and Shallow Slope Movement;
- (r) Metro Vancouver Ambient Air Quality Objectives;
- (s) Metro Vancouver Stormwater Design Guidelines;
- (t) Noise Policy;
- (u) Pile Driving BMPs;

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- (v) Protocols for Rare Plants Surveys;
- (w) Raptor Conservation BMPs;
- (x) Riparian Revegetation Guidelines;
- (y) Technical Guidance on Contaminated Sites;
- (z) Tree Replacement Criteria;
- (aa) Water Quality Guidelines – Approved;
- (bb) Water Quality Guidelines - Working; and
- (cc) Wildlife at Risk - EA Best Practice Guide.

1.2 Design-Builder’s Environmental Obligations

The Project Infrastructure is classified as a “designated environmentally sensitive area” in accordance with DBSS 165.01.04 and as such is subject to all the requirements set out in DBSS 165.

- (a) The Design-Builder shall be responsible for managing all environmental issues associated with the Project, and shall comply with, observe, satisfy and perform all of the Design-Builder’s Environmental Obligations. The Design-Builder shall perform the Project Work in full compliance with the Design-Builder’s Environmental Obligations, including compliance with the following, subject in each case to Section 1.2(b) of this Schedule:
 - (i) all applicable Environmental Laws, Permits and relevant requirements under any other applicable Laws and all applicable Reference Documents that are current at the time of the relevant Project Work;
 - (ii) the OEEA;
 - (iii) all applicable requirements of the Environmental Assessment Certificate, including:
 - (A) its conditions; and
 - (B) any conditions, commitments or requirements arising out of any amendment to the Environmental Assessment Certificate as may be subsequently issued from time to time;
 - (iv) all applicable requirements of the CEAA Screening Report and Decision Letter;
 - (v) the conditions, commitments, responsibilities and information set forth in this Schedule, including, as applicable, those set out in the Table of Commitments; and
 - (vi) a requirement to meet monthly with the Province, or more frequently as the Province deems necessary.

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- (b) For greater certainty, the Design-Builder shall be responsible, at its own cost and risk, for complying (and will cause all of its employees, agents and Subcontractors and employees of any of them to comply) with all environmental obligations except only for those specifically identified in this Agreement, including in the OEEA and the Table of Commitments, as being the obligation of the Province or not the responsibility of the Design-Builder, notwithstanding that the responsibility for any such environmental obligation may not specifically be an obligation of the Design-Builder.

1.3 OEEA and Table of Commitments

- (a) Without limiting the generality of Section 1.2 [Design-Builder's Environmental Obligations] of this Schedule, the Design-Builder shall at all times comply with and shall do or not omit to do anything necessary to ensure satisfaction of, and will be responsible for the activities set forth in the OEEA and, as applicable, the Table of Commitments, with the exception only of those conditions, commitments or responsibilities that are expressly identified in the OEEA or the Table of Commitments as the responsibility of the Province or not the responsibility of the Design-Builder.
- (b) Except as provided in Section 1.4(c) of this Schedule, in order to effect any amendment to be made after the Effective Date to the OEEA or the Table of Commitments as applicable to the Project, the Province shall issue a Province Change and the provisions of Part 7 [Province Changes and the Design-Builder Proposals] shall apply accordingly.
- (c) In the case of any conflict, ambiguity or inconsistency between or among the OEEA or the Table of Commitments and any other provision within this Agreement, including within this Schedule and within any of the other Schedules hereto, such other provision will prevail over the OEEA or the Table of Commitments, as the case may be.

1.4 Environmental Impacts and Changes to Environmental Permits

- (a) The Design-Builder shall use all reasonable efforts to keep environmental impacts from the Project within the magnitude and extent identified for the applicable reference concept footprint and where not possible to comply with applicable requirements of the Environmental Assessment Certificate, the Design-Builder shall submit to the Province's Representative in accordance with the Consent Procedure a request for the Design-Builder to make an application for an amended Environmental Assessment Certificate.
- (b) The Design-Builder shall be responsible for addressing the mitigation and compensation of all Project environmental impacts, except where the Province identifies otherwise in writing or as otherwise expressly provided in this Agreement.
- (c) Subject to Section 1.4(d) of this Schedule:
 - (i) any changes or amendments to the Environmental Assessment Certificate, including any changes to the Table of Commitments, required as a result of the Design-Builder's carrying out of the Project Work or other activities of the Design-Builder, shall be at the cost and risk of the Design-Builder, whether or not the application for such change is made by the Province or the Design-Builder; and

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- (ii) the Design-Builder shall be responsible for obtaining, in accordance with Section 1.6 [Environmental Permits] of this Schedule, all Permits from relevant Environmental Authorities and satisfying all other requirements (including in respect of consultations, hearings, reviews, studies and reports and initial and ongoing mitigative works) in connection with or resulting from any change or amendment to the Environmental Assessment Certificate for which it is responsible under Section 1.4(c)(i) of this Schedule, and for all costs, fees, expenses and delays incurred in connection therewith.

- (d) Where the Design-Builder is unable to apply for any change or amendment to the Environmental Assessment Certificate that is the Design-Builder's obligation or responsibility to obtain under this Section 1.4 without obtaining information, administrative assistance or other assistance from the Province or BCTFA or without submitting the application for such change or amendment in the name of the Province or BCTFA, the Province shall at the Design-Builder's cost provide, or cause BCTFA to provide, such information, administrative assistance and other assistance as the Design-Builder may reasonably request and the Province or BCTFA may reasonably be able to provide and have the legal ability to provide under existing Laws and, if requested, shall execute or cause to be executed such applications as are required to be in its or BCTFA's name to assist the Design-Builder in obtaining such change or amendment.

1.5 Best Management Practices

The Design-Builder shall perform the Design-Builder's Environmental Obligations in accordance with Best Management Practices and shall comply with, at its own cost, the provisions of the Best Management Practices, and will not do or omit or permit to be done or omitted anything which is inconsistent with such Best Management Practices.

1.6 Environmental Permits

- (a) Except as otherwise specifically provided in this Agreement, including in relation to Province Permits, the Design-Builder is required, at its own cost and risk, to obtain all Permits which relate to, or are required under Environmental Laws in connection with the Project and the Project Work, including all Permits necessary for the Design-Builder to fulfill the Design-Builder's Environmental Obligations.

- (b) Without limiting any of its other obligations under this Agreement, the Design-Builder shall observe and comply with the standards, practices and requirements in connection with Province Permits required under Environmental Laws in connection with the Project and the Project Work.

1.7 Inquiries and Reports to Environmental Authorities

- (a) The Design-Builder shall promptly on request provide the Province's Representative with such written authorizations as the Province may require from time to time in order to make inquiries of any Environmental Authorities regarding the Design-Builder or any of the Subcontractors or the compliance by the Design-Builder or any of the Subcontractors with Environmental Laws.

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- (b) The Design-Builder shall promptly forward to the Province's Representative a copy of any report, submission, application or other document relating to environmental matters on or at or affecting the Project Work, the Project Site or the Project Infrastructure that is filed or lodged by the Design-Builder (or any person for whom the Design-Builder is in law responsible) with or otherwise provided to any Environmental Authority and which is not otherwise required to be provided directly by the Design-Builder to the Province pursuant to this Agreement.

1.8 Environmental Records

The Design-Builder shall maintain in accordance with the Records Management Protocol all environmental documents and records (including all Permits) relating to the Project Site and the performance of the Project Work relating to environmental matters, including all records required to be maintained pursuant to the Construction Environmental Management Plan and the Environmental Enhancement Management Plan, but excluding any documents or records retained in the possession of the Province.

1.9 Performance Measures

The Design-Builder shall perform, comply with and satisfy the performance measures set out in this Schedule (indicated by the reference "PE[XXX]" or as otherwise identified in this Schedule) and, without limiting any other provision of this Agreement, the provisions of Part 10 [NCE Points and Default Points] of Schedule 10 shall apply if the Design-Builder fails to perform, comply with or satisfy any such performance measure.

PART 2 ENVIRONMENTAL MANAGEMENT

2.1 Environmental Manager

- (a) The Design-Builder's Environmental Manager will, irrespective of such person's other responsibilities, have defined authority for ensuring the establishment and maintenance of the Construction Environmental Management Plan and auditing and reporting on the performance of the Construction Environmental Management Plan, the OEEA, the Environmental Assessment Certificate, and any terms and conditions associated with environmental Permits.
- (b) The Environmental Manager shall be a Key Individual subject to the requirements of Section 3.3(b) of Schedule 2 [Representatives, Review Procedure and Consent Procedure].
- (c) The Environmental Manager shall have experience on major projects that are comparable in scope, complexity and nature to the Project in:
 - (i) developing and managing environmental plans, procedures and practices to address Project environmental requirements;
 - (ii) leading a multidisciplinary environmental team;
 - (iii) environmental regulatory management;

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- (iv) working with regulatory agencies;
 - (v) maintaining all required environmental Records; and
 - (vi) implementing environmental quality management systems and procedures in collaboration with the Quality Manager responsible for the Environmental Quality Management Plan in accordance with Schedule 7 [Quality Management].
- (d) The Environmental Manager shall have the following attributes:
- (i) be a Qualified Environmental Professional;
 - (ii) have an understanding of environmental regulations and legislation; and
 - (iii) have effective communication, conflict resolution and organization skills.
- (e) Without limiting the generality of the foregoing, the job specification and responsibilities of the Environmental Manager shall include the following:
- (i) directing all aspects of the Design-Builder's environmental program for the Project Work, including overseeing the environmental auditing program;
 - (ii) managing all environmental issues associated with the Project on a day-to-day basis, including overseeing the environmental monitoring program;
 - (iii) effective operation of the Construction Environmental Management Plan and other environmental plans on a day-to-day basis;
 - (iv) ensuring environmental issues and requirements are met in accordance with this Agreement;
 - (v) establishing and maintaining working relationships with relevant Environmental Authorities and Interested Parties,
 - (vi) taking a lead role in internal environmental design reviews including development of mitigation and compensation proposals, acceptable to the Province and Environmental Authorities;
 - (vii) liaising with the Province's Representative and acting as the single point representative for the Design-Builder on all matters relating to environmental management;
 - (viii) preparing and submitting to the Province's Representative all reports required under the OEEA, the Environmental Assessment Certificate, the Table of Commitments, the Construction Environmental Management Plan and the Environmental Enhancement Management Plan;
 - (ix) ensuring environmental issues and requirements are met in accordance with this Agreement; and

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- (x) ensuring all environmental monitoring, reporting, restoration, enhancement and habitat offsetting responsibilities are undertaken throughout the Term or until all environmental monitoring obligations have been fulfilled.

2.2 [Not Used]

2.3 Environmental Specialists

The Design-Builder shall have available, at all times during the Term, a multi-disciplinary team of qualified environmental specialists, including an appropriately qualified environmental monitor.

2.4 Environmental Management Requirements

The Design-Builder shall:

- (a) subject to Section 1.2 [Design-Builder's Environmental Obligations] of this Schedule, comply with all environmental requirements as set out in the OEEA, the Environmental Assessment Certificate and the Table of Commitments;
- (b) prepare all environmental submissions as set out in or required by this Agreement, including Section 2.5 [Environmental Plans and Reports] of this Schedule and Part 3 [Design and Certification Procedure] of Schedule 4;
- (c) issue and sign the Design Certificate (Environmental) in accordance with the procedures as set out in Part 3 [Design and Certification Procedure] of Schedule 4;
- (d) manage proactive programs in accordance with Schedule 9 [Communication and Engagement], including organizing and holding field reconnaissance meetings with Interested Parties from time to time with a view to ensuring that Interested Parties' concerns are clearly communicated to the Design-Builder to gather input and feedback and to respond to questions and concerns;
- (e) design and implement necessary habitat enhancements and offsets;
- (f) apply current Best Management Practices to the design and implementation of habitat enhancements and offsets and integrate the habitat design with stormwater design;
- (g) restore and revegetate those portions of the Project Infrastructure and Project Site that will be discontinued for road or Construction purposes;
- (h) implement revegetation schemes that are compatible with Burns Bog when landscaping or revegetating near Burns Bog;
- (i) carry out the Project Work in a manner that protects and maintains surface and groundwater resources, both within and outside the Project Site, including drinking water sources and infrastructure (private groundwater wells);
- (j) carry out the Project Work in a manner that maintains or restores environmental mitigation that was previously installed as part of the South Fraser Perimeter Road Project, including isolation berms separating SFPR run-off from Burns Bog, wildlife

mitigation including fencing and small/medium/large mammal wildlife crossings, and fisheries compensation sites;

- (k) be responsible for planning, scheduling and performing the Project Work in such a manner that the quality and quantity of water flowing from the Project Site, is, at all times, acceptable to all relevant Environmental Authorities, and take immediate action to correct any deficiency in water quality;
- (l) maintain appropriate riparian setbacks along the Fraser River, upland watercourses, and ditches within the Project Site;
- (m) identify and demark wildlife features within the Project Site;
- (n) conduct works in a manner that will prevent the discharge or introduction of deleterious substances into the receiving environment; and
- (o) apply current Best Management Practices to the design of all stormwater management systems and be responsible for implementing a stormwater design for the Project Infrastructure that will ensure that existing water quality and quantity conditions improve or, at a minimum, do not deteriorate.

2.5 Environmental Plans and Reports

- (a) The Design-Builder shall develop, implement, maintain, and update the plans, reports and data listed in Table 2.5:

Table 2.5 Schedule of Plans, Reports and Data (Response Time Measures)

Performance Measure	Deliverable Name	Specification Reference	Due Date	Review Procedure or Consent Procedure
PE 2.6b	Construction Environmental Management Plan (First Submission)	2.6	45 days from the Effective Date	Consent Procedure
PE 2.6c	Construction Environmental Management Plan (Updates)	2.6	As soon as completed when required, and in any event no later than June 1st annually	Review Procedure
PE 2.7b	Environmental Enhancement Management Plan (First Submission)	2.7	90 days prior to commencement of activity for which the Environmental Enhancement Management Plan is required	Consent Procedure

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 6: ENVIRONMENTAL OBLIGATIONS**

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Performance Measure	Deliverable Name	Specification Reference	Due Date	Review Procedure or Consent Procedure
PE 2.7c	Environmental Enhancement Management Plan (Updates)	2.7	As soon as completed, when required, and in any event no later than annually following the Province's acceptance of the initial plan through the Consent Procedure	Review Procedure
PE 2.5e	Environmental Work Plans	2.5	30 days prior to commencement of activity for which the Environmental Work Plan is required	Review Procedure
PE 2.5f	Monthly Environmental Reports	2.5	Within 14 days of the end of the month for which the report prepared	Review Procedure
PE 2.5g	Annual Environmental Reports	2.5	December 1 st annually	Review Procedure
PE 2.5h	Environmental Completion Report	2.5	Within 30 days of Total Completion Date	Review Procedure
PE 2.5i	Weekly Environmental Monitoring Reports	2.5	Within 1 week of the previous one week period of monitoring	Review Procedure
PE 2.5j	Annual Certificate of Compliance with All Environmental Laws	2.5	December 1 st annually	Review Procedure
PE 2.5k	Independent Environmental Site Assessment and/or Environmental Audit	2.5	Within 60 days of audit being requested by the Province's Representative	Review Procedure
PE 2.8b	Marine Access Management Plan (First Submission) (if required)	2.8	45 days from the Effective Date	Consent Procedure

Performance Measure	Deliverable Name	Specification Reference	Due Date	Review Procedure or Consent Procedure
PE 2.8c	Marine Access Management Plan (Updates) (if required)	2.8	As soon as completed, when required, and in any event no later than June 1st annually	Review Procedure

- (b) The documents referred to in Table 2.5 that are indicated to be subject to the Consent Procedure or the Review Procedure shall be submitted to the Province’s Representative for acceptance or review, as applicable, in accordance with the Consent Procedure or the Review Procedure, as the case may be, pursuant to Schedule 2 [Representatives, Review Procedure and Consent Procedure].
- (c) The Design-Builder shall also develop, implement, maintain and update other plans in accordance with the OEEA, the Environmental Assessment Certificate, the Table of Commitments and the terms set out in this Agreement, including the Traffic Management Plan in accordance with Schedule 4 [Design and Construction], the Environmental Quality Management Plan in accordance with Schedule 7 [Quality Management] and communication plans in relation to traffic management in accordance with Schedule 9 [Communication and Engagement], each of which shall, in addition to meeting all applicable requirements set out in this Agreement, be submitted to the Province’s Representative:
- (i) in the case of an initial plan not previously submitted and accepted by the Province under this Agreement, in accordance with the Consent Procedure prior to submitting such plan to any appropriate Environmental Authority; or
 - (ii) in the case of a plan which is an update to a plan previously submitted and accepted by the Province under this Agreement, in accordance with the Review Procedure prior to, or at the same time as, submitting such plan to any appropriate Environmental Authority,
- or as otherwise expressly specified in this Agreement.
- (d) The Design-Builder shall, promptly upon their production by or on behalf of the Design-Builder or upon their coming into the possession or control of the Design-Builder, provide the Province’s Representative with copies of all environmental site assessments, audits, reports and test results relating to the Project Site, including all assessments, audits, reports and tests at any time whether before or after the Effective Date.

PE 2.5e Environmental Work Plans shall be prepared by the Design-Builder and submitted to the Province’s Representative as supplementary to the Construction Environmental Management Plan, and will include site-specific and activity-specific mitigation measures to be implemented to address Construction or Project Work;

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PE 2.5f The Design-Builder shall prepare and submit to the Province's Representative and Environmental Authorities, during any period during which Construction is undertaken, a monthly environmental report that:

- (i) outlines the Design and Construction undertaken as part of the Project Work during the period, as well as future activities, key environmental issues, monitoring activities, mitigation measures (successes and failures), resolutions to environmental impacts, and how the Design-Builder was able to comply with all applicable Permits;
- (ii) provides an update on the status of the Table of Commitments; and
- (iii) has appended thereto all notes of meetings with Interested Parties, including action items, environmental sub-consultant reports, environmental incident reports, specific mitigation plans, and sediment and drainage plans for that period.

PE 2.5g Annual environmental reports, which will be inclusive of all Design and Construction periods of the Project, shall be prepared by the Design-Builder and submitted to the Province's Representative to provide a Project wide state of the environment summary.

PE 2.5h An environmental completion report shall be prepared by the Design-Builder and submitted to the Province's Representative prior to the Total Completion Date. The environmental completion report shall include as a minimum:

- (i) a summary of key environmental requirements pertaining to the scope of the Project Work, including environmental requirements described in this Agreement and in Permit conditions;
- (ii) a summary of the Design-Builder's environmental management approach and processes used in meeting such requirements;
- (iii) a summary of the status of environmental design as set out in Part 3 [Design and Certification Procedure] of Schedule 4 and the design implementation;
- (iv) a demonstration that the Design-Builder met all applicable environmental requirements including a Permit tracking matrix showing close-out of Permit conditions, an environmental monitoring summary showing close-out of environmental monitoring issues and an environmental quality summary showing acceptable disposition of environmental Nonconformities that arose during the Project Work; and
- (v) the identification of residual environmental issues that are likely to require resolution beyond the Total Completion Date.

PE 2.5i Weekly environmental monitoring reports shall be prepared during Construction and submitted to the Province's Representative. Weekly environmental monitoring reports shall include, as a minimum, the following information:

- (i) Project area;

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- (ii) name(s) of environmental monitor(s);
- (iii) period covered by report;
- (iv) date report submitted; overall weather conditions;
- (v) report recipient(s);
- (vi) contractor(s) undertaking work;
- (vii) description, photos and status of Construction by area, including within environmentally sensitive areas;
- (viii) environmental meetings and key issues discussed;
- (ix) key communications with Environmental Authorities;
- (x) status of current sediment and drainage management plans;
- (xi) an issue tracking matrix that provides the description of outstanding environmental issues and/or non-compliances, date of occurrence, corrective actions required, the anticipated timeline for implementing corrective actions and the status of issue resolution at the time of reporting, for each identified environmental issue;
- (xii) physical and/or biophysical sampling data collected during reporting period, including but not limited to water quality monitoring results and photographs; and
- (xiii) other information as may be required by Environmental Authorities.

PE 2.5j The Design-Builder shall, at the request of the Province's Representative from time to time where there are reasonable grounds for making such request and in any event not less frequently than annually, provide the Province's Representative with a certificate signed by the Design-Builder's Environmental Manager certifying that the Design-Builder has complied with all Environmental Laws and with all of its obligations under this Agreement in respect of environmental matters, providing full and complete particulars of such compliance and all documentation in connection therewith (or if any occurrence of non-compliance has taken place, providing full and complete particulars thereof and all documentation in connection therewith).

The certificate is to confirm that (to the best of the knowledge, information and belief of the Environmental Manager, having made reasonable inquiry) no adverse environmental occurrence has taken place on or at or affecting the Project Site or any part thereof (or, if any such occurrence has taken place, providing full and complete particulars thereof and all documentation in connection therewith).

PE 2.5k The Design-Builder shall, at the request of the Province's Representative from time to time where there are reasonable grounds for making such request, obtain and submit to the Province's Representative pursuant to the Review Procedure, from an independent

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environmental consultant (the identity of which has been accepted by the Province's Representative pursuant to the Consent Procedure), an environmental assessment of the Project Site (or any part or parts thereof) and/or an environmental audit of the Project Work, such compliance with any such request to be at the Design-Builder's own cost, including obtaining any additional investigations recommended by the environmental consultant.

2.6 Construction Environmental Management Plan

PE 2.6a The Design-Builder shall develop, implement, maintain and update the Construction Environmental Management Plan in accordance with the OEEA, the Environmental Assessment Application and the Environmental Assessment Certificate, which Construction Environmental Management Plan, including each of its component plans set out in Section 2.6(d) of this Schedule, will remain in effect until the Total Completion Date and will:

- (i) comply with all of the applicable requirements set out in this Schedule;
- (ii) identify applicable roles and responsibilities of the Design-Builder's environmental team;
- (iii) identify monitoring and reporting requirements;
- (iv) include each of the component plans listed in Section 2.6(d) of this Schedule; and
- (v) comply with all of the Design-Builder's Environmental Obligations, including those set forth in the OEEA and the Environmental Assessment Certificate.

PE 2.6b The Design-Builder shall submit the initial Construction Environmental Management Plan, including each of its component plans required for Construction as set out in Section 2.6(d) of this Schedule, to the Province's Representative in accordance with the Consent Procedure prior to submitting such initial Construction Environmental Management Plan to any appropriate Environmental Authorities.

PE 2.6c The Construction Environmental Management Plan, including each of its component plans set out in Section 2.6(d) of this Schedule, shall be expanded and updated through the Term until the Total Completion Date to reflect the Project Work scheduling, Project Site conditions and weather-dependent contingency measures. The Design-Builder shall submit all such updates to the Province's Representative in accordance with the Review Procedure prior to, or at the same time as, submitting such updates to any appropriate Environmental Authorities.

- (d) The Construction Environmental Management Plan will include the following component plans and any other plans required for Construction as set out in the OEEA and the Environmental Assessment Certificate:
 - (i) Air Quality and Dust Control Plan, which shall, as a minimum, describe the measures to be used to control dust during Construction and the program that will be implemented to monitor fugitive dusts, ambient particulate matter, and ambient air quality;

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- (ii) Agricultural Management Plan, which shall, as a minimum, describe the measures that will be implemented to avoid, minimize or reduce impacts to agricultural land and agricultural operations;
- (iii) Archaeological and Heritage Resources Management Plan, which shall, as a minimum, describe the measures to be implemented to identify, report and manage archaeological and heritage resources, and describe procedures to be followed should previously unidentified archaeological or heritage resources be encountered;
- (iv) Construction and Waste Management Plan, which shall, as a minimum, describe procedures and Best Management Practices to manage Construction materials, waste materials, sediment and soil, or other Hazardous Substances, measures to be implemented for managing material that may attract wildlife, appropriate disposal of materials including the prohibition of disposal of land clearing debris by burning unless under written approval of the MOE, and the requirement to reuse materials wherever possible;
- (v) Contaminated Sites Management Plan, which shall describe the measures to be implemented to manage, appropriately remediate and/or dispose of Hazardous Substances in the event that Contamination is encountered or an accidental release or other accident results in soil or groundwater Contamination, include measures to manage and document any movement of soil within the existing Sunbury lands, including monitoring obligations in accordance with Abandonment of Approval 106335, and address at a minimum the following requirements:
 - (A) The Design-Builder shall develop a surface and groundwater monitoring and sampling program, designed to confirm the absence of unacceptable water quality. The surface and groundwater monitoring program shall be consistent with the Sunbury Connector Fill Area Surface and Groundwater Monitoring Program dated May 2015, subsequent surface and groundwater monitoring reports and any additional regulatory requirements imposed by the MOE.
 - (B) The Design-Builder shall undertake semi-annual cap inspections and groundwater and surface water monitoring consistent with the Design-Builder's surface and groundwater monitoring and sampling program, and any regulatory requirements imposed by the MOE.
 - (C) The Design-Builder shall be responsible for decommissioning, in accordance with the *Groundwater Protection Regulation* (British Columbia), any groundwater monitoring wells that will be impacted by the Project Work.
 - (D) The Design-Builder shall be responsible for replacing any groundwater monitoring wells impacted by the Project Work to the extent required to conform to the groundwater monitoring and sampling program described in paragraph (A) above.

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- (E) By February 14 each year, the Design-Builder shall submit to the Province's Representative in accordance with the Consent Procedure an annual report for the preceding year in a format acceptable to the Province and, thereafter, consistent with previous annual reports. The annual report shall be signed by a Qualified Environmental Professional and shall include interpreted results from soil cap observations and surface water and groundwater monitoring and sampling, and a summary of any non-compliant circumstances related to the requirements imposed in paragraphs (A) and (B) above. The summary shall include the nature of the non-compliance(s), the corrective measures implemented or to be implemented (including a schedule for completion), and relevant supporting documentation.
- (vi) Environmental Awareness and Education Plan, which shall, as a minimum, describe how, when and the type of environmental training, education and awareness programs that will be provided to the personnel of the Design-Builder and its Subcontractors, including senior Design and Construction personnel, the Construction safety manager and Construction workers on the Project Site;
- (vii) Environmental Monitoring Plan, which shall describe the Design-Builder's environmental monitoring program including, as a minimum, general environmental monitoring of Construction as well as more specialized monitoring to check the effective implementation of Construction Environmental Management Plan sub-plans, including monitoring rationale, parameters, sampling approach, issue tracking mechanism and reporting;
- (viii) Fish and Fish Habitat Management Plan, which shall, as a minimum, identify fish habitat within the Project Site, describe fisheries habitat off-sets, fish habitat restoration planning measures, describe applicable instream work windows, isolation and salvage activities, appropriate Construction methodology, and measures to avoid serious harm to fish and fish habitat and manage potentially deleterious materials including concrete, mortar or grouting, and describe the Construction and post-Construction monitoring program;
- (ix) Health and Safety Plan, which shall, as a minimum, summarize aspects of environmental management that have implications for human health and safety and describe applicable health and safety strategies and/or measures, cross-referencing as necessary to the Health and Safety Program;
- (x) Noise and Vibration Management Plan, which shall, as a minimum, describe Project Site specific schedule, procedures and Best Management Practices to control Construction noise emissions and vibration, in accordance with this Schedule and Schedule 4 [Design and Construction], including target noise emission levels of equipment, equipment maintenance and management, and describe community communication, and noise monitoring requirements;
- (xi) Spill Management and Emergency Response Plan, which shall, as a minimum, list the spill abatement materials/equipment to be used on the Project Site, identify responsible Project personnel and external contacts, and describe the communications, containment, clean-up, follow-up and reporting requirements;

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- (xii) Surface Water Quality and Sediment Control Plan, which shall, as a minimum, identify areas within the Project Site or Construction activities that have the potential to create erosion or sedimentation, describe general and site specific measures that will be applied to mitigate soil and erosion and shallow slope movement, control sediment-laden flows, and prevent sediment-laden water from entering watercourses, and describe the monitoring program, including water quality monitoring, that will be implemented and will comply with DBSS Section 165;
- (xiii) Vegetation Management Plan, which shall, as a minimum, identify and describe red- and blue-listed plant species, culturally valued vegetation and plant communities, describe the approach to be used for the removal of trees and other vegetation along the Project alignment, describe measures to be used to minimize the disturbance of riparian vegetation, protect upland vegetation, manage and protect rare or listed plants, culturally valued vegetation and plant communities, manage removal of merchantable timber, restore and/or replant reclaimed abandoned roadways and temporarily disturbed areas with native species, as well as measures for handling, storing, re-using and/or disposing of non-merchantable vegetation, salvaging coarse woody debris for re-use in fish and wildlife enhancements, and measures to prevent and/or control invasive plant species; and
- (xiv) Wildlife Management Plan, which shall, as a minimum, identify and describe red- and blue-listed wildlife species that may be present, provide for reasonable salvage of such species prior to construction, identify and describe sensitive wildlife habitat on Construction drawings and demark on the Project Site, and identify measures to be implemented to minimize impacts to wildlife and describe wildlife enhancement measures, including restoration planning measures to benefit wildlife.

2.7 Environmental Enhancement Management Plan

PE 2.7a The Design-Builder shall develop, implement, maintain and update an Environmental Enhancement Management Plan in accordance with the OEEA, the Environmental Assessment Certificate, the Table of Commitments, and the requirements of Environmental Agencies, which shall remain in effect throughout the Term or until all environmental monitoring obligations have been fulfilled, and will:

- (i) comply with all of the applicable requirements set out in this Schedule;
- (ii) identify monitoring and reporting requirements;
- (iii) include all of the matters listed in Section 2.7(d) of this Schedule; and
- (iv) comply with all of the Design-Builder's Environmental Obligations, including those set forth in the OEEA, Environmental Assessment Certificate, Table of Commitments and by Environmental Agencies.

PE 2.7b The Design-Builder shall submit the initial Environmental Enhancement Management Plan to the Province's Representative in accordance with the Consent Procedure prior to

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submitting such initial Environmental Enhancement Management Plan to any Environmental Agencies.

PE 2.7c The Environmental Enhancement Management Plan shall be updated throughout the Term to reflect the Project Site conditions and weather dependent contingency measures. The Design-Builder shall submit all such updates to Province's Representative in accordance with the Review Procedure prior to, or at the same time as, submitting such updates to any appropriate Environmental Agencies.

- (d) The Environmental Enhancement Management Plan will, as a minimum, include:
- (i) a description of and rationale for the environmental enhancements and habitat offsets that are necessary to meet all applicable commitments outlined in the OEEA, the Environmental Assessment Certificate and the Table of Commitments, and to meet the requirements of Environmental Agencies;
 - (ii) site-specific environmental enhancement and offsetting plans, at least at a conceptual design level;
 - (iii) post-Construction environmental monitoring and reporting requirements describing the scope and frequency of environmental monitoring and reporting that will be carried out by the Design-Builder following the Total Completion Date, as defined in the OEEA Habitat Monitoring Plan and other environmental monitoring that may be required by Environmental Agencies; and
 - (iv) any other requirements, procedures or plans required to be provided by the Design-Builder on or after the Total Completion Date as set out in the Table of Commitments and Assurances, the OEEA or required by Environmental Agencies.

2.8 Marine Access Management Plan

PE 2.8a If marine access is required for the Project Work, the Design-Builder shall develop, implement, maintain and update, in accordance with the OEEA, the Environmental Assessment Application, the Environmental Assessment Certificate and the terms set out in this Schedule, Schedule 4 [Design and Construction] and Schedule 9 [Communication and Engagement], a Marine Access Management Plan which shall remain in effect until the Total Completion Date and shall, as a minimum:

- (i) describe measures to be implemented to manage marine traffic and navigation during Construction based in or requiring access to or from the Fraser River, and associated communication requirements and procedures;
- (ii) identify any marine-based staging areas that may be required during Construction;
- (iii) identify travel corridors for marine vessels and equipment into and within the construction areas;
- (iv) describe the anticipated construction schedule for marine-based activities;

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- (v) identify priorities for the timing and location of marine access, and options for the alternative movement of vessels and boats;
- (vi) describe any required navigational aids, markers, and signs that will be used to delineate construction areas;
- (vii) detail local marine communications and emergency preparedness procedures, including, as a minimum:
 - (A) marine stakeholder communication program to inform the marine community of construction and decommissioning activities that may interfere with navigation;
 - (B) establishment of an emergency telephone line that will be available to the marine community during construction;
 - (C) issuance, distribution, advertising and posting of notices regarding construction activities and schedule; and
 - (D) processes and procedures to inform marine traffic (such as through signage, a website, a direct telephone line for information) of any in-river activities that may encroach the navigation channel and other areas frequented by marine users, construction phasing, work scheduling, location of in-river staging areas, and times and duration of temporary impacts to marine users.

PE 2.8b The Design-Builder shall submit the initial Marine Access Management Plan, if required, to the Province's Representative in accordance with the Consent Procedure prior to submitting such initial Marine Access Management Plan to any appropriate Environmental Authorities.

PE 2.8c The Marine Access Management Plan shall, if required, be expanded and updated throughout the Term until the Total Completion Date to reflect the Project Work scheduling, Project Site conditions and weather-dependent contingency measures. The Design-Builder shall submit all such updates to the Province's Representative in accordance with the Review Procedure prior to, or at the same time as, submitting such updates to any appropriate Environmental Authorities.

PART 3 CONTAMINATION AND HAZARDOUS SUBSTANCES

3.1 Waiver of Site Profile

The Design-Builder waives the requirement, if any, for the Province to provide a site profile to the Design-Builder for the Project Site under the *Environmental Management Act* (British Columbia) and acknowledges that it may obtain from the Environmental Authorities site profiles for any site listed in the Site Registry at <http://www2.gov.bc.ca/gov/content/environment/air-land-water/site-remediation/contaminated-sites/information-about-sites>.

3.2 No Use of Hazardous Substances

- (a) The Design-Builder shall not use or permit to be used on the Project Site or any part thereof for the sale, storage, manufacture, disposal, handling, treatment, generation, use, transport, refinement, processing, production, remediation or Release of, or any other dealing with, any Hazardous Substance without the prior approval of the Province unless:
 - (i) the Province normally conducts or permits such activities in the case of other “controlled access highways” as defined in the *Transportation Act* (British Columbia); or
 - (ii) in the case of Hazardous Substances addressed in the Heavy Metal Memorandum of Understanding, such sale, storage, manufacture, disposal, handling, treatment, generation, use, transport, refinement, processing, production, remediation or Release of, or any other dealing with, such Hazardous Substances is in compliance with the Heavy Metal Memorandum of Understanding.
- (b) Approval may be granted or withheld in the Province’s discretion, and then only in compliance with all Environmental Laws.

3.3 Dealing with Hazardous Substances

The Design-Builder shall:

- (a) deal with all Hazardous Substances on the Project Site in accordance with all Environmental Laws and, in the case of Hazardous Substances addressed in the Heavy Metal Memorandum of Understanding, in accordance with the Heavy Metal Memorandum of Understanding; and
- (b) at all times comply with and cause all persons for whom the Design-Builder is responsible to comply with all Environmental Laws, and, where applicable, the Heavy Metal Memorandum of Understanding, in respect of the Project Site and the performance of the Project Work.

3.4 Notification to Province

PE 3.4a The Design-Builder shall promptly, and in any event within 24 hours, notify the Province’s Representative of:

- (i) any Release of a Hazardous Substance or any other occurrence or condition involving Hazardous Substances at or affecting the Project Site that could cause Contamination of the Project Infrastructure, the Project Site or any other lands in their vicinity or subject the Design-Builder, the Province or BCTFA to any fines, penalties, orders, investigations or other proceedings under any Environmental Laws, together with full particulars of such Release, occurrence or condition including the location, time, agencies involved, damages suffered or caused and remedial action taken;

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- (ii) all charges, orders, investigations or notices of violation or non-compliance issued against the Design-Builder or relating to the performance of the Project Work or the Project Site under any Environmental Laws; and
- (iii) any notice, claim, action or other proceeding by any person against the Design-Builder or relating to the performance of the Project Work or the Project Site concerning the Release or alleged Release of any Hazardous Substance.

3.5 Notification to Environmental Authorities

PE 3.5a The Design-Builder shall, as required pursuant to and in accordance with Environmental Laws, notify the relevant Environmental Authorities of any Release of any Hazardous Substance at or from the Project Site.

Failure to provide such notice means the Province may, but will not be obliged to, notify the relevant Environmental Authorities of any Release of any Hazardous Substance.

3.6 Removal and Remediation

- (a) The Design-Builder shall:
 - (i) promptly at any time, if requested by the Province or by any other Environmental Authority pursuant to Environmental Laws; and
 - (ii) in any event upon the expiry or earlier termination of this Agreement, remove from the Project Site or remediate or manage any and all Hazardous Substances to the numerical or risk-based standards required or permitted by Environmental Laws or, in the case of Hazardous Substances addressed in the Heavy Metal Memorandum of Understanding, in compliance with the Heavy Metal Memorandum of Understanding, and otherwise in accordance with Environmental Laws to the extent applicable.
- (b) The Design-Builder shall remediate by removal any Contamination of any lands in the vicinity of the Project Site resulting from Hazardous Substances brought onto, used at or Released at or from the Project Site or by the Design-Builder or any person for whom the Design-Builder is responsible.
- (c) Upon encountering any Contamination on the Project Site, the Design-Builder shall prepare and submit to the Province's Representative pursuant to the Consent Procedure a plan for the remediation, removal or management of such Contamination, if such remediation, removal or management is required in accordance with this Agreement and, following the acceptance of such plan by the Province, or sooner if required by Environmental Laws, the Design-Builder shall commence and complete any required remedial, removal or management work in accordance with such plan and all Environmental Laws to the extent applicable, provide the Province's Representative with full information with respect to any such remedial, removal or management work, and comply with the reasonable requirements of the Province with respect to any such remedial, removal or management work.

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3.7 Hazardous Substances Brought onto Project Site

Notwithstanding any Laws or any other provision in this Agreement to the contrary, all Hazardous Substances and materials, goods or other items containing Hazardous Substances brought onto and used at or Released at or from the Project Site by the Design-Builder or any person for whom the Design-Builder is in law responsible shall be and remain the sole and exclusive property of the Design-Builder and shall not become the property of the Province or BCTFA, notwithstanding their incorporation into or affixation to the Project Site or the Project Work and notwithstanding any termination or expiration of the Term.

3.8 Contamination Management Requirements

The Design-Builder shall manage Existing Contamination in accordance with the requirements of Abandonment of Approval 106335, including carrying out all monitoring requirements applicable to the Project Site from the Effective Date until the first to occur of:

- (a) the expiry of the General Project Work Defect Warranty Period;
- (b) the close out of Abandonment of Approval 106335; and
- (c) the Termination Date.

SCHEDULE 6: ENVIRONMENTAL OBLIGATIONS

**APPENDIX A
ENVIRONMENTAL PERMITS**

PART 1: ENVIRONMENTAL ASSESSMENT CERTIFICATE

See attached.

PART 2: CEAA SCREENING REPORT AND DECISION LETTER

See attached.

**IN THE MATTER OF
THE ENVIRONMENTAL ASSESSMENT ACT, S.B.C. 2002, c. 43 (ACT)**

AND

**IN THE MATTER OF
AN APPLICATION FOR AN ENVIRONMENTAL ASSESSMENT CERTIFICATE
(APPLICATION)**

BY

**THE MINISTRY OF TRANSPORTATION
(PROPONENT)**

FOR THE

**SOUTH FRASER PERIMETER ROAD PROJECT
(PROJECT)**

ENVIRONMENTAL ASSESSMENT CERTIFICATE # T08-02

Whereas:

- A. The Proponent proposes to construct a new four-lane divided highway located on the south side of the Fraser River. The facility would extend from northeast of the existing Highway 17/Deltaport Way intersection, through the municipalities of Delta and Surrey, and terminate just west of TransLink's future Golden Ears Bridge crossing of the Fraser River. The Project would be primarily an efficient east-west route serving goods movers and regional traffic to and from port facilities, Tsawaassen Ferry Terminal, industrial sites and Vancouver Airport;
- B. The Project constitutes a reviewable project pursuant to Part 8 of the *Reviewable Project Regulations* (R.C. Reg. 370/02), as it involves the addition of greater than 2 lanes of paved highway over a continuous distance of greater than 20 km;
- C. On June 28, 2006, the Executive Director of the Environmental Assessment Office (EAO), in accordance with section 4(1)(a) of the Act, delegated certain statutory and regulatory powers to a Project Assessment Director;
- D. On February 3, 2003, the Project Assessment Director issued an order under section 10(1)(c) of the Act, stating that the Project requires an Environmental Assessment Certificate (Certificate);
- E. On October 21, 2004, the Project Assessment Director issued an Order under section 11 of the Act, setting the scope, procedures and methods for the environmental assessment of the Project;

- F. On October 10, 2006, the Project Assessment Director accepted for review the Application filed by the Proponent for a Certificate for the Project;
- G. On October 25, 2006, the Project Assessment Director determined that the notification and consultation measures undertaken and proposed by the Proponent for both the public and First Nations were adequate;
- H. On April 17, 2007, the Project Assessment Director issued an Order under section 13 of the Act, amending certain provisions of the section 11 Order;
- I. The Application was made available for review by the public and by representatives from federal, provincial and local government agencies, the Katzie First Nation; Kwantlen First Nation; Kwikwetlem First Nation; Musqueam Indian Band; Semiahmoo First Nation; Tsawwassen First Nation; Qayqayt (New Westminster) Indian Band;
- J. The Proponent, as a ministry of the provincial Crown, and EAO, undertook measures to consult with First Nations regarding the proposed Project;
- K. The Project Assessment Director prepared a report on the potential effects of the Project, entitled the "South Fraser Perimeter Road Project Assessment Report" (Assessment Report);
- L. The Executive Director has referred the Application, the Assessment Report and Recommendations of the Executive Director and Reasons for Recommendations pursuant to section 17 of the Act, to the Minister of Environment and the Minister of Community Development (Ministers); and,
- M. The Ministers have considered the Application, the Assessment Report and the Recommendations of the Executive Director and Reasons for Recommendations.

Now Therefore,

The Ministers, pursuant to section 17(3) of the Act, hereby issue this Certificate to the Proponent for the Project, subject to the following conditions (Conditions):

Conditions

1. The Proponent must cause the Project to be designed, located, constructed, and operated in accordance with the Conditions of this Certificate, the documents listed in Schedule A, and the Owner's Table of Commitments and Assurances in Schedule B, and must comply with all of the Conditions of this Certificate to the reasonable satisfaction of the Minister.
2. Where, in the reasonable opinion of the Minister, there is a conflict or inconsistency between any of the documents listed in Schedule A, Condition 1 must be interpreted so that the contents of the later dated document will vary, repeal, rescind or supersede, as the case may be, the earlier dated documents listed in Schedule A.

3. Where, in the reasonable opinion of the Minister, there is a conflict or inconsistency between any of the documents listed in Schedule A and the Owner's Table of Commitments and Assurances in Schedule B, Condition 1 must be interpreted so that Schedule B will vary, repeal, rescind or supersede, as the case may be, the documents listed in Schedule A.
4. Where, in the reasonable opinion of the Minister, there is a conflict or inconsistency between Schedules A or B and the Conditions which follow, these Conditions must take precedence over and supersede the relevant provision(s) of Schedules A or B.
5. The Proponent must submit, to the satisfaction of the Executive Director, quarterly reports on the status of compliance with the Conditions of this Certificate, and the Owner's Table of Commitments and Assurances in Schedule B, from the date of issuance of this Certificate until completion of Project construction. The Executive Director may adjust or extend this reporting requirement by providing written notice to the Proponent.
6. This Certificate is of no force or effect until signed by the Ministers.
7. This Certificate does not constitute a permit, licence, approval or any other authority required under any other enactment.
8. The Proponent, except in connection with granting security to Project lenders or other financing entities or financing facilities, must obtain the written consent of the Minister, such consent not to be unreasonably withheld, prior to disposing, whether legally, beneficially or otherwise, of:
 - a) this Certificate, or any right, title or interest conferred by this Certificate; or,
 - b) the Project.

Duration of Certificate

9. The Proponent must have, in the reasonable opinion of the Minister, substantially started the construction of the Project within five years of the date of issue of this Certificate, otherwise this Certificate expires.

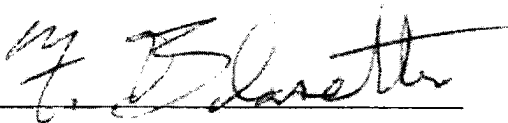
Suspension, Cancellation and Amendment of Certificate

10. This Certificate may be subject to cancellation, suspension in whole or in part, amendment, or the attachment of new Conditions, for any of the following reasons:
 - a) the Minister has reasonable and probable grounds to believe that the Proponent is in default of:
 - i. an order of the Courts under section 35(2), 45 or 47 of the Act;
 - ii. an order of the Minister made under section 34 or 36 of the Act; or,
 - iii. one or more requirements or Conditions of this Certificate; or,

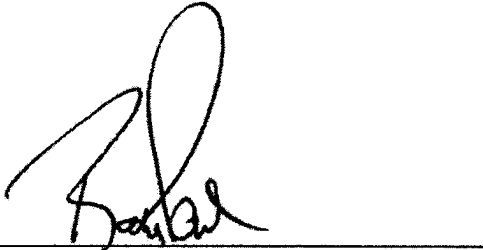
- b) the Proponent or its officers or employees when acting on behalf of the Proponent, have been convicted of an offence under the Act, with respect to the Project.

The Conditions of this Certificate are agreed to by the Proponent this


30th day of June, 2008



Frank Blasetti
Assistant Deputy Minister
Partnerships Department
Ministry of Transportation



Honourable Barry Penner
Minister of Environment



Honourable Blair Lekstrom
Minister of Community Development

Issued this 24th day of July, 2008, in Victoria, British Columbia.

SCHEDULE A

DOCUMENTATION AND CORRESPONDENCE FOR THE SOUTH FRASER PERIMETER ROAD PROJECT

1. *South Fraser Perimeter Road Environmental Assessment Application* submitted by the Ministry of Transportation (Proponent) September 25, 2006
2. November 22, 2006: Letter from M. Smith to J. Shimkus re: Errata to SFPR Application
3. December 15, 2006: Letter from M. Smith to J. Shimkus re: Errata (2) to SFPR Application
4. January 24, 2007: *Overview of Public Comments*, a summary report of comments received during first public comment period and responses, submitted by P. Ryan
5. January 24, 2007: Email from P. Ryan to EAO with attached table detailing public comments received during first public comment period and responses
6. January 26, 2007: Letter from M. Smith to C. DeMarco (Greater Vancouver Regional District) in response to comments on the Application
7. January 26, 2007: Letter from M. Smith to L. Sullivan (Canadian Environmental Assessment Agency) in response to comments on the Application
8. January 26, 2007: Letter from M. Smith to M. Jones (City of Surrey) in response to comments on the Application
9. January 26, 2007: Letter from M. Smith to Mayor L. Jackson in response to comments on the Application submitted by Corporation of Delta
10. January 26, 2007: Letter from M. Smith to E. Karlsen in response to comments on the Application submitted by Agricultural Land Commission
11. January 26, 2007: Letter from M. Smith to K. Zimmerman (Ministry of Agriculture and Lands) in response to comments on the Application
12. January 26, 2007: Letter from M. Smith to Dr. S. Acheson (Archaeology Branch, Ministry of Tourism, Sports and the Arts) in response to comments on the Application
13. January 26, 2007: Letter from M. Smith to M. Engelsjord (Department of Fisheries and Oceans) in response to comments on the Application
14. January 26, 2007: Letter from M. Smith to J. McGuire in response to comments on the Application submitted by Environmental Protection Branch, Ministry of Environment

15. January 26, 2007: Letter from M. Smith to A. Taylor (Ministry of Economic Development) in response to comments on the Application
16. January 26, 2007: Letter from M. Smith to K. Trainor (Environment Canada) in response to comments on the Application
17. January 26, 2007: Letter from M. Smith to K. Stiff (Transport Canada) in response to comments on the Application
18. January 26, 2007: Letter from M. Smith to M. Brisco (Health Canada) in response to comments on the Application
19. January 26, 2007: Letter from M. Smith to V. Au (Environment Canada) in response to comments on the Application
20. January 29, 2007: Letter from M. Smith to T. Bell (Environmental Stewardship Branch, Ministry of Environment) in response to comments on the Application
21. February 7, 2007: Letter from G. Freer to Chief Diane Bailey and Council, Katzie First Nation re: comments on the Application
22. February 23, 2007: Memo from M. Smith to J. Mackie (Transport Canada) re: Navigation Allowances and Conceptual Design for Navigable Waters
23. March 22, 2007: Letter from M. Smith to K. Stiff (Transport Canada) re: follow-up response to comments on the Application
24. March 22, 2007: Letter from M. Smith to L. Budhoo (Fraser Health Authority) re: follow-up response to comments on the Application
25. March 23, 2007: Memo from C. Palmer to L. Sullivan (Canadian Environment Assessment Agency) in response to comments on *Revised Effects of the Environment on the Project*
26. March 28, 2007: Letter from M. Smith to M. Brisco (Health Canada) re: follow-up response to comments on the Application
27. March 28, 2007: Letter from M. Smith to A. Taylor (Ministry of Economic Development) re: follow-up response to comments on the Application
28. March 28, 2007: Letter from M. Smith to Mayor L. Jackson (Corporation of Delta) re: follow-up response to comments on the Application
29. March 28, 2007: Letter from M. Smith to E. Karlsen (Agricultural Land Commission) re: follow-up response to comments on the Application
30. March 28, 2007: Letter from M. Smith to Dr. S. Acheson (Archaeology Branch, Ministry of Tourism, Sports and the Arts) re: follow-up response to comments on the Application

31. March 28, 2007: Letter from M. Smith to C. Hainsworth (Transport Canada) re: follow-up response to comments on the Application
32. March 28, 2007: Letter from M. Smith to T. Bell (Environmental Stewardship Division, Ministry of Environment) re: follow-up response to comments on the Application
33. March 28, 2007: Letter from M. Smith to K. Zimmerman (Ministry of Agriculture and Lands) re: follow-up response to comments on the Application
34. March 28, 2007: Letter from M. Smith to J. McGuire (Ministry of Environment) re: follow-up response to comments on the Application
35. March 28, 2007: Letter from M. Smith to M. Engelsjord (Department of Fisheries and Oceans) re: follow-up response to comments on the Application
36. March 28, 2007: Letter from M. Smith to L. Sullivan (Canadian Environmental Assessment Agency) re: follow-up response to comments on the Application
37. March 28, 2007: Letter from M. Smith to C. DeMarco (Greater Vancouver Regional District) re: follow-up response to comments on the Application
38. March 28, 2007: Letter from M. Smith to K. Trainor (Environment Canada) re: follow-up response to comments on the Application
39. March 28, 2007: Letter from M. Smith to V. Au (Environment Canada) re: follow-up response to comments on the Application
40. March 28, 2007: Letter from M. Smith to A. McCammon (Environmental Management Branch, Ministry of Environment) re: follow-up response to comments on the Application
41. March 28, 2007: Letter from M. Smith to M. Jones (City of Surrey) re: follow-up response to comments on the Application
42. April 23, 2007: Letter from M. Smith to G. Harvie (Corporation of Delta) re: response to comments on the Application
43. April 30, 2007: Letter from M. Smith to K. Trainor (Environment Canada) with attached memorandum dated April 17, 2007 re: response to interim comments from Environment Canada on stormwater management, air quality, hydrogeology, contaminated sites, and potential impacts on water quality
44. June 15, 2007: Letter from R. LePage for G. Freer (Proponent) to Chief P. Cunningham, Kwikwetlem First Nation re response to comments on the Application
45. July 27, 2007: Memo entitled *Zones of Influence: South Fraser Perimeter Road (July 2007)* submitted by M. Smith.

46. July 30, 2007: Report entitled *South Fraser Perimeter Road Draft Stormwater Management Plan Outline* submitted by the Proponent, and a May 5, 2008 email from M. Smith to M. Engelsjord (Fisheries and Oceans Canada) and Cathy Hainsworth (Transport Canada) explaining that the document is the final version
47. September 5, 2007: Letter with attachment from M. Smith to J. Shimkus (EAO) in response to comments on the Application submitted by the Ministry of Environment dated August 21, 2007.
48. September 21, 2007: Letter from G. Freer to L. Walls (Environment Canada) re: response to comments on the Application. The letter has two attachments: a Technical Memorandum dated September 21, 2008 and the MoT Response Table to Environment Canada's August 14, 2007 Comment Letter
49. October 29, 2007: Letter from M. Smith to J. Shimkus re: response to public comments received during the third public comment period
50. October 29, 2007: Letter from M. Smith to K. Zimmerman (Ministry of Agriculture and Lands) in response to comments on the Agricultural Enhancement Strategy. The revised Agricultural Enhancement Strategy Tracking Table is attached
51. October 29, 2007: Letter from M. Smith to C. DeMarco (Greater Vancouver Regional District) in response to comments on the report entitled *Scientific Advisory Panel's Opinion to Environment Canada Concerning Potential Environmental Impacts of Proposed SFPR on Burns Bog*
52. October 29, 2007: Letter from M. Smith to G. Harvie (Corporation of Delta) in response to comments on the *Revised Cumulative Effects Assessment*
53. October 30, 2007: Email from M. Smith to M. Darling in response to comments on the Application that were submitted by Health Canada
54. October 31, 2007: Letter from M. Smith to J. McGuire (Ministry of Environment) re: additional MoT commitments to address potential environmental impacts associated with the SFPR
55. January 21, 2008: Letter from G. Freer to C. Hainsworth (Transport Canada) in response to comments on the Application dated November 19, 2007
56. Feb 11, 2008. *South Fraser Perimeter Road Vegetation and Wildlife Mitigation Monitoring Plan* submitted by M. Smith.
57. April 16, 2008: Memo from M. Smith to N. Valsangkar re: *SFPR Inter-agency Environmental Review Committee Terms of Reference*
58. April 22, 2008: Memo from M. Smith to P. Finkel re: *SFPR Alignment Update*
59. *Draft Habitat Compensation Plan* (February 2007)
60. June 6, 2008: Email from G. Freer to N. Amann-Blake re: Clarification regarding noise assessment

61. June 12, 2008: Footprint and Severance and Isolation Effects for Alignment 4.1d Prepared by Summit Environmental Consultants Ltd. With figures 1 -9
62. Draft SFPR Agricultural Enhancement Strategy, Ministry of Transportation, May 2008 with Appendix A "Agricultural Enhancement Map" and Appendix B "South Fraser Perimeter Road Agricultural Enhancement Strategy Summary - April 2008")
63. May 26, 2008: Letter from M. Smith to M. Engelsjord re: Updated Fish Habitat Compensation Plan for South Fraser Perimeter Road
64. June 18, 2008: Email from M. Smith to C Hainsworth re: Final Cumulative Effects Assessment for SFPR (with attachment)
65. June 4, 2008: Letter from M. Smith to J. Lothrop and P. Finkel re: South Fraser Perimeter Road Project Update (inclusive of Appendix A to F).
66. June 14, 2008: Email from G. Freer to N. Amman-Blake re: SFPR Crescent Slough Crossing
67. June 24, 2008: "Additional Clarifications from MoT to Questions from EAO"

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES

June 20, 2008

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OWNER'S TABLE OF COMMITMENTS AND ASSURANCES - June 20, 2008

SOUTH FRASER PERIMETER ROAD PROJECT: OWNER'S TABLE OF COMMITMENTS AND ASSURANCES¹

Ref	Objective Commitments and Assurances	Timing	Delivered By
1.0	Responsible Environmental Management		
1.1	Develop, implement and maintain an Environmental Management Plan (EMP) for the Project to demonstrate how the design, construction and operation, including maintenance, of the Project: <ul style="list-style-type: none"> • Will be carried out to avoid or mitigate negative impacts; • Will be carried out in an environmentally responsible manner, in accordance with MOT Specifications for Protection of the Environment (DB SS165)²; • Will employ Best Management Practices (BMPs³); and • Will comply with federal and provincial legislation, permits, approvals and authorizations, including the Environmental Assessment Certificate (EAC). 	All phases	Contractor
1.2	Prepare and implement a Construction Environmental Management Plan (CEMP), (which is a component of the EMP) ⁴ , including relevant sub-plans, for the Project prior to the start of relevant construction activities.	Pre-construction	Contractor
1.3	Obtain required statutory permits, approvals, and authorizations before proceeding with construction that requires such permits.	All phases	Contractor
1.4	Adhere to the terms and conditions of the: EAC; federal screening report; the EMP; MOT specifications Section 165, Protection of the Environment; and any other applicable permits, licenses and approvals.	Pre-construction, Construction	Contractor

¹ The "Owner" is understood to mean the applicant for an environmental assessment certificate pursuant to BCEAA (i.e. MoT) and to whom the Certificate may be issued. Any transfer of commitments and assurances in this *Appendix E* by the applicant to the selected Contractor, must comply with all conditions of the Certificate. A full transfer of the Certificate and its conditions to the Contractor - as the new "Owner" - requires a name change for the holder of the Certificate and necessitates an Amendment to the Certificate.

² Should there be a conflict between the DBSS165 and these commitments, the more stringent environmental protection measure will apply.

³ Those that are technically and economically feasible and as defined specifically in other sections of this Table.

⁴ As discussed in section 11 of the EA Application.

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
1.5	<p>Establish an Inter-Agency Environmental Review Committee (IAERC), in accordance with the Terms of Reference developed during Application review, to provide for agency review and comment on plans and designs prior to construction, including but not limited to:</p> <ul style="list-style-type: none"> • Detailed design of stormwater management infrastructure; • Detailed vegetation and wildlife mitigation plans and mitigation monitoring plans; and • Environmental management plans. 	Pre-construction, construction	MOT/Contractor
1.6	<p>Provide all project related EMPs, including component EMPs, to applicable regulatory agencies in the IAERC for review and comment, at least 30 calendar days prior to the start of construction that requires such plans.</p>	Pre-construction	Contractor
1.7	<p>Relevant sub-plans to be included in the CEMP will include those to address environmental issues identified in the Application and supporting documentation submitted to the EAO during the Application review, and described in the Application (Section 11, pg. 523), including but not limited to:</p> <ul style="list-style-type: none"> • Agriculture Mitigation Plan; • Air Quality and Dust Control Plan; • Archaeological Mitigation / Monitoring Plan; • Construction and Hazardous Waste Management Plan; • Contaminated Sites Management Plan; • Contractor Awareness and Education Plan; • Environmental Monitoring Plan; • Fisheries Habitat Mitigation and Compensation Plan; • Health and Safety Plan; • Invasive Species Management Plan; • Noise and Vibration Management Plan; • Spill Management and Emergency Response Plan; • Surface Water Quality and Sediment Control Plan; • Wildlife and Habitat Management Plan.. 	Pre-construction	Contractor
1.8	<p>Manage contamination encountered during project development, regardless of the current assessment of potential contamination, in accordance with applicable regulatory requirements.</p>	All phases	Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
1.9	Prepare and implement an Operational Environmental Management Plan, prior to operation and maintenance activities. Provide the operational EMP to relevant reviewing and regulatory agencies, for review and comment, at least 30 calendar days prior to the onset of operation and maintenance activities.	Pre-construction	Contractor
1.10	At a minimum, review the Wildlife and Habitat Management Plan and modify if required, three years post-construction and make a decision regarding the next review date and/or determine the closure date for the plan(s). The method for review, modification, and decision on closure of the plan(s) will be defined by the applicable regulatory agencies within the IAERC.	Operations	Contractor
2.0 Monitoring			
2.1	Ensure that environmental monitoring and reporting for the Project will be conducted, with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations as applicable.	Construction	Contractor
2.2	Incorporate a monitoring component into all applicable sub-plans of the construction EMP developed for the construction phase of the Project.	Pre-construction	Contractor
2.3	Outline in each of the sub-plans of the construction EMP: <ul style="list-style-type: none"> • Rationale for monitoring; • Parameters to be monitored; • Monitoring program details; and • Required follow-up actions. 	Pre-construction	Contractor
2.4	The Owner will engage an Environmental Monitor for the construction phases of the Project to undertake environmental monitoring activities and oversee implementation of each of component plans of the EMP developed for the Project. The Environmental Monitor will monitor, evaluate, and report to the owner on construction activities and the effectiveness of the environmental management strategies and mitigation measures, with respect to the terms and conditions of the Application and other regulatory Permits, Approvals and Authorizations that may apply. The Monitor will be responsible for making on-site decisions and taking on-site action to avoid/respond to potential environmental effects which could include temporary stop work orders if necessary.	Construction	Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
2.5	Implement environmental quality management program through monitoring, auditing and reporting activities for the Project with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations.	All phases	Contractor
3.0 Incident Management			
3.1	Respond to environmental incidents, including spill incidents in accordance with the Emergency Response, Plan to minimize effects and risks to the general public, on-site workers and the environment.	All phases	Contractor
3.2	<p>Include protocols, consistent with the BC Spill Reporting Regulation, for reporting spills to appropriate emergency response authorities, including;</p> <ul style="list-style-type: none"> • The Provincial Emergency Program, in the case of any spills of reportable deleterious substances into waters frequented by fish, regardless of the amount of the spill; and • To adjacent property owners and occupiers, including local government, where utilities cross the highway and there is a potential for an incident to extend beyond the Project boundaries. 	Pre-construction	Contractor
3.3	Train all field Project personnel regarding implementation of the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans.	All phases	Contractor
3.4	Incorporate relevant municipal contacts into the emergency contacts for the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans prepared for construction of the Project.	Pre-construction	Contractor
3.5	Follow applicable MOT standard specifications and Canadian Council of Ministers of Environment codes and procedures if temporary fuel storage/fuelling facilities are required during construction. Where there is a difference in standards, the most stringent measure for environmental protection will take precedence.	Construction	Contractor
4.0 Community Consultation			
4.1	Consult with local governments, stakeholders and the public during all stages of Project development.	Pre-construction, Construction	MoT, Contractor
4.2	Conduct community open houses and information sessions during the design review stage to obtain input on design refinements, during the preliminary and final design review stages.	Pre-construction,	MoT, Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
4.3	Provide regular public information updates on the progress of construction, the schedule, and upcoming milestones.	Construction	MoT, Contractor
4.4	Consult with the Corporation of Delta (CoD) and the City of Surrey (CoS) during all stages of project development and construction.	Pre-construction, Construction	Contractor
4.5	Provide updated media information materials, as part of the Project commitment to making project information available to the public.	All phases	Contractor
4.6	Track project enquiries and responses.	All phases	Contractor
4.7	Discuss potential economic opportunities generated by the Project with participating First Nations throughout the Post-EA Certification, Design and Construction Phases of the Project.	Pre-construction, Construction	MoT, Contractor
4.8	Obtain input from participating First Nations to identify appropriate measures to mitigate potential project related impacts on their previously identified interests in relation to fisheries and habitat matters.	Pre-construction	Contractor
5.0	Stormwater Management		
5.1	Ensure that the design, construction and maintenance of stormwater management infrastructure for the Project takes an integrated approach to stormwater management and contributes to maintaining, or improving, drainage and water quality conditions directly adjacent to the corridor.	All phases	Contractor
5.2	Design, construct and maintain stormwater management infrastructure, such that it to meets the performance objectives outlined in the Stormwater Management Plan Outline (July, 2007) and the Application. Monitoring of the infrastructure will be undertaken to confirm performance objectives are met or, if necessary, additional steps are taken to ensure performance objectives are achieved.	All phases	Contractor
5.3	Consult with municipalities adjacent to the new construction area such that the approach to the management of stormwater and drainage design is complementary to, and can be integrated with, adjacent municipal stormwater infrastructure.	Pre-construction	Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
5.4	Provide final designs for stormwater management infrastructure to relevant First Nations and reviewing and regulatory agencies for review and comment at least 30 calendar days prior to relevant construction activities in order to verify that the proposed infrastructure achieves agreed upon performance measures identified in the Stormwater Management Plan Outline (July 2007).	Pre-construction	Contractor
5.5	Drain stormwater and road runoff away from red and blue listed plant communities and do not construct integrated stormwater management infrastructure in such habitat areas.	Construction, Operation	Contractor
5.6	Obtain input from participating First Nations regarding mitigation measures outlined in the stormwater and drainage plan and effective integration of those measures into the design and operation of the Project.	Pre-construction	Contractor
6.0	Agriculture		
6.1	Consult with the Agricultural Land Commission (ALC), Ministry of Agriculture and Lands (MAL), Delta Farmers' Institute (DFI), individual farm owners and the CoD, through all future stages of Project development, construction and operation, to ensure impacts to agricultural lands and operations are minimized where possible and appropriately addressed where impacts are unavoidable.	All phases	MoT, Contractor
6.2	Obtain ALC approvals regarding areas within the Agricultural Land Reserve (ALR) required for the project, prior to construction.	Pre-construction	MoT, Contractor
6.3	Develop and implement an Agricultural Mitigation Plan as outlined in the Application that identifies potential impacts to agriculture as a result of project construction activities and measures for avoiding and addressing such impacts where possible. The scope will include those measures outlined in the Application and the Agricultural Enhancement Strategy (April 2008), including but not limited to mitigation measures focused on: <ul style="list-style-type: none"> • Road access; • Drainage and irrigation; • Utilities; and • Maintaining the agricultural land base. 	Pre-construction	Contractor

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6.4	Finalize and implement specific agricultural enhancement initiatives, including but not limited to, compensation mechanisms focused on improving road access and drainage and irrigation, as part of the application process to the ALC and summarily as part of the Agricultural Enhancement Strategy (April 2008).	Pre-construction, Construction	MoT
6.5	Retain the services of a Professional Agrologist to: <ul style="list-style-type: none"> • Liase with the owner, contractor and farmer(s); • Oversee a consultation and dispute resolution process for individual farmers affected by the Project; and • Oversee monitoring and effectiveness of measures proposed to address impacts to agriculture during design, construction and operation. 	All phases	MoT
6.6	Avoid, to the extent possible, using agricultural lands outside of the Right-Of-Way (ROW), for staging areas. For all agricultural lands that are required for use as staging areas, implement construction BMPs (as noted in the Agriculture Mitigation Plan in the EMP) to manage potential construction related effects and restore lands to pre-construction condition, or better agricultural capability, upon completion of project works.	Pre-construction, Construction	Contractor
6.7	Consult with individual farm owners, as well as MAL, ALC, CoD, DFI and other stakeholders, to identify potential impacts to agricultural operations and infrastructure and ensure that such impacts are avoided, mitigated for, or appropriately addressed during future stages of design and construction of the Project. The scope of potential impacts to farm operations includes, but is not limited to: <ul style="list-style-type: none"> • Agricultural drainage; • Utilities; • Road Access; and • Pollinators. 	Pre-construction, Construction	MoT, Contractor
6.8	Undertake reasonable measure to facilitate the consolidation of parcels of isolated agricultural lands, to promote continued agricultural use of such lands.	All phases	MoT
6.9	Undertake reasonable measures to minimize potential loss of ALR lands, including existing farm(s) by: <ul style="list-style-type: none"> • Refining the Project footprint where feasible; and • Optimizing use of existing ROW. 	Pre-construction, Construction	Contractor

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7.0 Air Quality			
7.1	Ensure that the construction works and operations for the Project are conducted in compliance with environmental permits and approvals and that all reasonable measures are taken to address project-related effects on air quality.	Construction, Operation	Contractor
7.2	<p>Develop and implement an Air Quality and Dust Control Plan for the construction phase of the project. The plan will:</p> <ul style="list-style-type: none"> • Include an air quality monitoring program with thresholds, which if exceeded, will trigger the implementation of additional mitigation and corrective measures; • Commit to the best available, known and effective, measures for mitigating construction related air emissions, including diesel particulate matter (PM), as identified by relevant regulatory agencies. This would include, where practical, the use of diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs) on all on-road and off-road project equipment in combination with use of a B20 biodiesel blend; • Include an anti-idling policy for construction equipment and other vehicles associated with construction related activities; • Commit to fugitive dust minimization strategies (e.g., wheel wash and sweeping), and dust suppression techniques (e.g. watering) on roads; and • Identify site specific considerations, where applicable, such as proximity to sensitive environmental or human receptors. 	Pre-construction, Construction	Contractor
7.3	Provide the Air Quality and Dust Control Plan to Metro Vancouver, Environment Canada (EC), Ministry of Environment (MoE), Transport Canada, Health Canada (HC) and other relevant agencies for review and comment at least 30 calendar days prior to relevant construction activities.	Pre-construction	MoT, Contractor
7.4	Avoid burning as a means for disposing of land clearing debris.	Construction	Contractor
8.0 Traffic Management			
8.1	Ensure that the design of the Project is integrated with local road networks, and that construction of the proposed project includes measures for avoiding or minimizing impacts to local road networks		MoT, Contractor

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8.2	Prepare and implement a Traffic Management Plan in co-ordination with CoS and CoD to address construction related traffic conditions.	Pre-construction, Construction	Contractor
8.3	Consult with the CoD, CoS, MoT district office, and other stakeholders to design and construct project infrastructure so that it is effectively integrated with existing and planned local road networks.	Pre-construction, Construction	Contractor
9.0 Noise and Vibration			
9.1	Ensure that potential noise impacts associated with the project are considered and mitigation provided for during design, construction and operation of the project.	All phases	Contractor
9.2	Prepare and implement a Noise and Vibration Management Plan for the construction phase of the Project that will include specific mitigation measures, and locations where they will be applied to address construction related noise.	Pre-construction, Construction	Contractor
9.3	Prepare a noise complaint protocol as part of the CEMP Noise and Vibration Management Plan to respond in a timely manner to concerns and complaints raised by residents and take reasonable actions to reduce the Project-related construction noise in question.	Pre-construction	Contractor
9.4	Provide the construction Noise and Vibration Management Plan to the CoS, CoD and other stakeholders for review and comment 30 calendar days prior to the onset of relevant construction activities.	Pre-construction	Contractor
9.5	Design and construct mitigation measures to address potential operational noise impacts on residential areas as part of the project according to the MoT Noise Policy (1993).	Pre-construction, Construction	Contractor
9.6	Conduct noise monitoring at the baseline sites during the first year after construction is complete to assess the effectiveness of mitigation measures, with a commitment to further mitigation if necessary, technically feasible and practical.	Operation	Contractor
9.7	Consult with the CoD and CoS to look for opportunities to use tree planting and landscaping to mitigate potential visual, noise and air quality impacts.	Pre-construction, Construction	Contractor
9.8	Participate in meetings with affected communities and residents to address site-specific noise issues in the event that late evening or night time construction works prove necessary in the vicinity of residential areas.	Pre-construction, Construction	Contractor

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9.9	Perform pre-condition surveys to document existing state of buildings and facilities in the vicinity of SFPR construction activities as per standard geotechnical BMPs. This will form the baseline conditions, against which post-construction condition surveys will be carried out to assess any vibration impacts to buildings and facilities as a result of Project construction.	Pre-construction	Contractor
9.10	Monitor ground vibrations, as per standard geotechnical BMPs, adjacent to buildings to confirm that vibration levels are within ranges expected to avoid construction-related vibration.	Construction	Contractor
10.0 Contaminated Sites and Property Acquisition			
10.1	Ensure that potential site contamination is investigated, and managed in compliance with the Contaminated Sites Regulation (Environmental Management Act), during all stages of project development including property acquisition, design and construction		Contractor
10.2	Assess all Tier 1 and Tier 2 properties required for the ROW for potential contamination prior to construction and take steps, as required, to investigate and address site contamination that may exist.	Pre-construction, Construction	MoT, Contractor
10.3	Manage any contaminated groundwater encountered in accordance with the requirements of the <i>Environmental Management Act</i> and associated regulations.	Pre-construction, Construction	MoT, Contractor
10.4	Undertake risk assessment and remediation activities, as required, and manage potential contamination in compliance with the provincial <i>Environmental Management Act</i> and Contaminated Sites Regulation.	Pre-construction, Construction	MoT, Contractor
10.5	Should contaminated groundwater be identified along the route, include measures to control/mitigate the potential for impacts to surface water in future stormwater design.	All phases	MoT, Contractor
10.6	Notify MoE of potential migration of contaminants from known or identified Tier 1 off-corridor properties of concern discovered during supplementary investigations or Project-related activities and use information to manage and mitigate contaminated sites issues prior to construction.	Pre-construction	Contractor

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Ref	Objective Commitments and Assurances	Timing	Delivered By
10.7	As part of the CEMP, the Contaminated Sites Management, Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans, develop and implement a protocol for identifying and managing contaminated and potentially contaminated materials during the construction phase of the Project.	Pre-construction, Construction	Contractor
11.0 Fisheries			
11.1	Ensure that all works and activities associated with the construction, operation and maintenance of the project are conducted in compliance with the <i>Fisheries Act</i> . This includes implementing mitigation measures and best management practices to ensure that the project does not cause any unauthorized harmful alteration, disruption or destruction of fish habitat, that the project does not cause any harm or mortality to fish, and that the project does not cause or result in the deposit of a deleterious substance of any type, including sediment, into a watercourse that is frequented by fish.	All phases	Contractor
11.2	Obtain an authorization under subsection 35(2) of the <i>Fisheries Act</i> for any unavoidable harmful alteration, disruption or destruction of fish habitat prior to relevant construction works or activities	All phases	Contractor
11.3	Develop and construct fish habitat compensation measures that offset all project impacts to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by Fisheries and Oceans Canada and in accordance with any s. 35(2) <i>Fisheries Act</i> authorizations.	Pre-construction, Construction	Contractor
11.4	Implement appropriate measures to adequately mitigate the effects of the creation of impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline (July, 2007) for the project.	Pre-construction, construction, operation	Contractor
11.5	Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements	Pre-construction, construction, Operation	Contractor
11.6	Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.	Construction	Contractor

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11.7	Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum , McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.	Pre-construction, construction	Contractor
11.8	Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations..	All phases	MoT, Contractor
11.9	Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. "habitat banking"), to determine the ratio of habitat types and to which drainage compensation will apply.	Pre-construction	Contractor
11.10	Follow BMPs in the construction of all new ditches and stormwater watercourses.	Construction	Contractor
11.11	Retain maintenance responsibility for compensation sites within the Project limits. For sites constructed in areas outside of the Project limits, establish site-specific agreements for access and maintenance with the relevant stakeholder/landowner.	Operations	Contractor
12.0	Water Quality		
12.1	Ensure that the construction works and operations for the Project are conducted in compliance with environmental requirements and BMPs in order to avoid impacts to water quality.	All phases	Contractor
12.2	Develop and implement a Surface Water Quality and Sediment Control Plan and provide the plan for review and comment by relevant environmental agencies at least 30 calendar days prior to the start of relevant construction activities.	Pre-construction	Contractor

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Ref	Objective Commitments and Assurances	Timing	Delivered By
12.3	Sample water from potentially impacted drinking water wells to assess potential adverse effects to water quality associated with during construction and operation phases of the project. Provide sampling water quality data to the local health authority for review and comment.	Construction, Operation	Contractor
12.4	<p>The Surface Water Quality and Sediment Control Plan will at a minimum:</p> <ul style="list-style-type: none"> • Identify requirements for additional water quality monitoring prior to and during construction to ensure preventative and mitigation measures can be taken as appropriate, to avoid impacts to water quality; • Identify potential water quality contaminants of concern generated by construction activities and associated preventative and mitigative measures; • Include a BMP maintenance plan to ensure BMPs implemented are functioning as designed and corrective actions are taken when required; and • Be submitted to the applicable regulatory agencies at least 30 calendar days prior to start of construction activities for review. 	Pre-construction, Construction	Contractor
13.0 Wildlife and Vegetation			
13.1	Ensure that the design, construction, and operation of the project, avoids where practical and technically feasible, impacts to vegetation and wildlife.	All phases	Contractor
13.2	Prepare and implement a Wildlife and Habitat Management Plan to avoid and, where necessary, mitigate potential impacts to vegetation, wildlife and wildlife habitat. Provide the Plan to relevant regulatory and reviewing agencies for review and comment at least 30 calendar days prior to relevant construction activities beginning. The Wildlife and Habitat Management Plan will include best practices including but not limited to those identified in the Application (Table 7.7-17), draft Wildlife Mitigation Crossing Plan (April 2007), and Zones of Influence memo (July 2007) in order to avoid, and where necessary, mitigate potential effects on vegetation and wildlife. This plan will also identify protocols for the survey and salvage of vegetation and wildlife as appropriate and required.	Pre-construction, Construction	Contractor
13.3	Develop and implement mitigation measures to avoid and minimize impacts to wildlife during construction and operation of the project including, but not limited to those measures identified in the Application (September, 2006), draft Wildlife Mitigation Crossing Plan (April 2007) and Zones of Influence Assessment memo (July 2007).	Pre-construction, Construction	Contractor

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Ref	Objective Commitments and Assurances	Timing	Delivered By
13.4	<p>During the design phase, the MoT will finalize its determination of the type and location of sound barriers to be constructed along the perimeter of Burns Bog. For the south-western alignment (adjacent to Crescent Slough), this design will include the construction of a solid sound barrier or a barrier that will provide equivalent mitigation. MoT will ensure on-going consultation with TC, EC, MoE and other IAERC members as appropriate, during design regarding the proposed type and location of sound barriers to be installed around Burns Bog</p>	Pre-construction	MoT, Contractor
13.5	<p>Consult with the MoE and the Canadian Wildlife Service (CWS) of Environment Canada, to identify suitable compensation, including but not limited to that identified in the Wildlife and Habitat Management Plan and Habitat Compensation Plan (February, 2007), to address residual effects on vegetation and wildlife as a result of the Project.</p>	Pre-construction	Contractor
13.6	<p>Work with reviewing and regulatory agencies to develop and implement a comprehensive and long term Mitigation Monitoring Plan (MMP), based on the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007), to monitor the effectiveness of proposed mitigation measures in addressing Project-related effects on vegetation and wildlife, including species at risk.</p> <p>Data collection and monitoring in support of the implementation of the MMP will begin prior to construction and continue for a period of time, to be determined with relevant regulatory agencies, during operation. Information collected in relation to the MMP will be used to guide detailed planning of mitigation, assess the effectiveness of such mitigation, and determine where additional measures may be required.</p> <p>The MMP will include scientifically defensible thresholds or performance measures to facilitate the evaluation of the effectiveness of mitigation.</p>	All phases	Contractor
13.7	<p>Undertake site-specific vegetation surveys in accordance with the regionally supported <i>Protocols for Rare Plants Surveys</i>, to identify the presence and distribution of red- and blue-listed plants species prior to final design and construction. Provide information on the presence and distribution of such plants species to MoE for review and use the information to guide final design and construction to avoid or mitigate impacts to these species.</p>	Pre-construction	Contractor

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Ref	Objective Commitments and Assurances	Timing	Delivered By
13.8	Avoid direct impacts to sensitive red and blue listed plant communities where possible and adhere to construction exclusion windows determined by regulators.	Construction	Contractor
13.9	Develop a plan for salvaging plants and seeds, for review by MoE, where impacts to red and blue listed plant species cannot be avoided, for replanting off-alignment.	Pre-construction	Contractor
13.10	Make all reasonable efforts to avoid impacts to confirmed streambank lupine habitat and confirmed stream bank lupine seed banks in the project corridor, as identified in consultation with the Streambank lupine recovery team, during design construction and operation of the Project. Where impacts to such areas cannot be avoided, work with the Ministry of Environment and the Streambank Lupine Recovery team to identify and carry out appropriate mitigation measures including, but not limited to, the stockpiling of soil containing streambank lupine seeds.	Construction	Contractor
13.11	<p>Undertake pre-construction bird nest surveys and restrict clearing during the breeding season. Pre-construction bird nest surveys will include, but not necessarily be limited to the following:</p> <ul style="list-style-type: none"> • Conduct pre-construction raptor, heron or any listed species nest and roost tree surveys, consistent with applicable BMPs, to determine presence of active/inactive raptor and heron nests in the corridor and work scheduling with respect to the nest locations and applicable timing restrictions. • Prepare pre-construction bird nest survey protocols should works include clearing of vegetation during the general bird breeding time period as determined by MOE. • Conduct pre-construction bird nest surveys to the satisfaction of the MOE should the Contractor intend to seek approval from the MOE for vegetation clearing within the bird breeding time period (defined by MOE) in any year during the Contract Period. 	Pre-construction	Contractor
13.12	Consult with MoE on the development and implementation of an Invasive Species Management Plan to address potential effects of the project related to the spread of invasive plant and aquatic wildlife species within the project corridor.	Pre-construction, Construction	Contractor

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Ref	Objective Commitments and Assurances	Timing	Delivered By
13.13	Include large mammal crossings adjacent to the perimeter of Burns Bog. The final number and location of wildlife crossings will be identified in the Wildlife Mitigation Crossing Plan, which will be finalized in consultation with MoE and EC.	Pre-construction	Contractor
13.14	Follow the design criteria outlined in the MOT Manual of Aesthetic Design Practice and the MOT Landscape Policy and Design Standards that form the landscape and site restoration design criteria for the Project.	Pre-construction, Construction	Contractor
13.15	Use data collected through the MOT administered Wildlife Accident Reporting System to identify areas of increased wildlife collisions and to monitor direct effects on wildlife.	Operations	Contractor
13.16	Identify the location of sensitive wildlife habitats, including but not limited to habitat for species at risk, red and blue listed plant communities and high biodiversity habitats, on detailed design drawings in order to avoid or minimize potential effects to these areas.	Pre-construction	Contractor
14.0 Species at Risk			
14.1	Ensure that all reasonable measures are taken to avoid or lessen effects of the Project on listed wildlife species and their critical habitat and that potential effects that could occur are monitored. All mitigation and monitoring measures will be undertaken in a manner that is consistent with applicable recovery strategy and actions plans.	Pre-construction, Construction	Contractor, MoT
14.2	Undertake a salvage program for Pacific water shrew from, at a minimum, high and moderate-rated habitat adjacent to the SFPR. Other areas potentially requiring salvage will include lower-rated habitat, connected to higher-rated habitat, and will be determined in consultation with MoE and the PWS Recovery Team.	Pre-construction, Construction	Contractor
14.3	Consult with MoE regarding the mitigation of potential effects on Pacific water shrew and take all practical steps to apply the most recent Pacific water shrew best management practices to address potential effects including identifying additional opportunities to avoid direct effects to areas, designated as critical habitat by the PWS Recovery Team, during design, construction and operation.	Pre-construction, Construction	Contractor

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14.4	Consult with MOE to develop a mitigation and compensation strategy for Pacific water shrew, where opportunities are available, based on habitat quality and connectivity to surrounding habitat. Undertake sampling program, where required, to determine the presence and distribution of Pacific water shrew to support detailed design of mitigation.	Pre-construction, Construction	MoT/Contractor
14.5	Detailed design of wildlife crossing mitigation for southern red-backed vole (RBV) will be conducted assuming the presence of RBV in high and moderate rated habitat identified in the EA. Monitoring of the use of wildlife crossing structures will include provisions for assessing the use of such structures by RBV.	Pre-construction	Contractor
14.6	Undertake a review of local museum specimens to confirm the distribution of <i>Sorex rowheri</i> within the Lower Fraser Valley. Where possible, use findings to support detailed design of mitigation.	Pre-construction	Contractor
14.7	Use information obtained through the Mitigation Monitoring Plan to support detailed planning of mitigation to address potential noise, visual and collision effects of the project on barn owl. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan.	All phases	Contractor
14.8	Use information obtained through the Mitigation Monitoring Plan to support detailed planning of mitigation, including pre-construction salvage where appropriate, to address potential effects of the project, including those related to collision and changes in hydrology, on red-legged frog and western toad. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan.	All phases	Contractor
14.9	Consult with MOE to plan and undertake at least one pre-construction, one construction and two operational inventories of at-risk aquatic insects in habitat known to or suspected of supporting such species and potentially affected by the project, including but not necessarily limited to the Fraser Heights Wetland, to confirm the findings of the environmental assessment and to monitor potential impacts of the project on aquatic insects.	All phases	Contractor

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14.10	<p>Consult with the Canadian Wildlife Service to develop and implement a Mitigation Monitoring Plan to monitor and assess the effectiveness of measures proposed to avoid or mitigate potential effects on Sandhill Crane. The Plan will identify:</p> <ul style="list-style-type: none"> • species habitat requirements; • existing conditions in the project area; • potential project related effects and mitigation; • core indicators for assessing the effectiveness of mitigation; and • proposed study methodology and data interpretation and reporting protocols. 	Pre-construction, Construction	MOT
15.0 Burns Bog			
15.1	Avoid potentially significant impacts to hydrological and ecological values associated with Burns Bog (i.e., alignment refinements to avoid ecological and hydrological values, development of hydrological mitigation that meet the hydrologic objectives identified).	All phases	MOT/Contractor
15.2	Consult with the MV, CoD, MoE, EC, and the Burns Bog Management Planning Committee (BBMPC) and Scientific Advisory Panel (SAP) to ensure design, construction and operation of the Project complements long term management objectives established for the Burns Bog Ecological Conservation Area.	All phases	Contractor
15.3	Consult with the reviewing agencies to finalize construction and post-construction monitoring requirements related to Burns Bog including, but not limited to, those identified in the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007). Monitoring requirements with respect to Burns Bog will include but not be limited to those relating to: air quality, water quality, water levels, red-listed plant communities, and wildlife.	Construction, Operation	Contractor
15.4	Share environmental data from Burns Bog collected as part of the development of the SFPR project, with agencies responsible for the management of the Burns Bog Ecological Conservancy Area in order to support the implementation of the long term management plan for the Bog.	All phases	Contractor

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15.5	<p>Design, construct and operate hydrology mitigation infrastructure, to mitigate potential effects of the project on the hydrology of Burns Bog, in a way that meets the following performance objectives:</p> <ul style="list-style-type: none"> • Site specific solutions – The design, construction and operation of hydrology mitigation will be based on, and take into account, site specific conditions. • Compatibility between highway water management and bog water management – Providing for active water level controls in the Bog that are independent of SFPR-related water management. • Prevention of mineral migration into the Bog. – Where indicated, providing a low permeability barrier between the SFPR highway ditch and the lagg ponds/ditches by: using material to construct the berm that supports appropriate vegetation on the berm and prevents the introduction of mineral material into the Bog; and maintaining hydraulic gradients so that Type 1 bog waters flow toward the highway at all times. • Resilience – Providing a design that is sufficiently robust to maintain and actively manage water levels under average and extreme conditions and if Bog conditions change. • Highway and mitigation construction does not preclude future restoration of Burns Bog – Providing flexibility of design that allows, for example, for future water control structures that allow for raising of water level as part of future bog restoration. • Holistic design – Hydrology mitigation concepts are designed in way that ensure they will be compatible with, and help achieve multiple, mitigation requirements. <p>As the design of hydrology mitigation is advanced, it will be documented in a Hydrology Work Plan. This document will be finalized prior to commencement of pre-load activities around Burns Bog.</p>	All phases	MoT
15.6	<p>Pre-load activities around Burns Bog, including areas north of the Highway 99 interchange and west of Nordel Way, will not commence until TC (and other decision-making authorities as required) has reviewed and is satisfied with the final Hydrology Work Plan and the status of the hydrology mitigation design.</p>	Pre-construction	MoT

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15.7	Provide opportunities for the active involvement of agencies responsible for the management of the Burns Bog Ecological Conservancy Area, and the Scientific Advisory Panel (SAP), in the design, construction and operation of project related works adjacent to Burns Bog including but not limited to those proposed as mitigation for potential project related effects.	All phases	MoT, Contractor
15.8	Consult with MV, CoD, EC and MoE on the development of a water balance model and a drainage model to support the design, construction and operation of hydrology mitigation infrastructure adjacent to Burns Bog and support implementation of the Burns Bog Ecological Conservancy Area Management Plan.	Pre-construction	Contractor
15.9	Finalize an Air Quality Management Plan, in consultation with TC, EC and other IAERC members as appropriate, prior to commencing pre-loading activities around Burns Bog. This document will identify all technically and economically feasible mitigation measures to be implemented to prevent generation and transmission of dust during the pre-load and construction phases of the project.	Pre-construction	MoT, Contractor
15.10	Collect a minimum of 4 months of baseline dust fall monitoring between June and September 2008. Following the collection of this information, the MOT will meet with TC and EC to discuss the baseline monitoring information collected and the approach for continued data collection, prior to the commencement of pre-loading activities around Burns Bog (i.e., north of the Highway 99 interchange and west of Nordel Way).	Pre-construction	MoT
15.11	Work co-operatively with the Tsawwassen First Nation to maintain appropriate access for TFN members to Burns Bog to facilitate TFN's harvesting rights pursuant to the Tsawwassen Final Agreement	All phases	MoT, Contractor
15.12	Ensure that the development and operation of stormwater management infrastructure does not compromise the ability to achieve hydrology mitigation objectives adjacent to Burns Bog	All phases	MoT, Contractor
15.13	Implement the monitoring and follow-up activities identified in the Screening document, for a period of five years after the project has commenced operation, to ensure the effectiveness of mitigation measures related to aerial deposition, hydrology, and Sandhill crane in the vicinity of Burns Bog.	Operation	Contractor, MoT

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16.0	Archaeology		
16.1	Ensure that the design, construction and operation of the Project is advanced in a way that avoids, or minimizes potential impacts to known archaeological sites, including the Nottingham Farm, St. Mungo and the Glenrose Cannery sites, as well as other sites that may be encountered during project planning and development.	All phases	Contractor
16.2	Work with participating First Nations who have identified related interests within the context of the ongoing environmental review process and the BC Archaeology Branch regarding investigation of unsurveyed areas within the Project area assessed as having archaeological potential at an appropriate level for an archaeological impact assessment and develop mitigation measures consistent with the BC Archaeological Impact Assessment Guidelines.	Pre-construction	MoT, Contractor
16.3	Obtain a valid <i>Heritage Conservation Act</i> Section 14 Heritage Inspection Permit with adequate provisions to address requirements for investigations and potential impacts to previously unrecorded archaeological sites should they arise. Immediately report previously undocumented archaeological sites that come to light during the construction phase of the Project to the BC Archaeology Branch and participating First Nations.	Pre-construction, Construction	MoT, Contractor
16.4	Include required edits and revisions to the Application in the final <i>Heritage Conservation Act</i> Permit report.	Pre-construction	MoT
16.5	<p>Work with the Musqueam Indian Band and other interested First Nations in developing a mutually acceptable Site Management Plan (SMP) for the Glenrose / St. Mungo area, to encourage the preservation of archaeological deposits through the protection and management of archaeological and heritage resources during planning, design, construction and operation phases of the SFPR project.</p> <p>The Plan will include, but not be limited to:</p> <ul style="list-style-type: none"> • a summary of existing information (archaeology and oral history); • summary of existing site conditions; • site management objectives (short, medium and long term); and • site management strategies (preconstruction, construction, post-construction phases). 	Pre-construction	MoT

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Ref	Objective Commitments and Assurances	Timing	Delivered By
16.6	Develop and implement an archaeological mitigation program focused on intact archaeological deposits that includes systematic data recovery (excavation) and archaeological monitoring for the St. Mungo and Glenrose Cannery Sites. Develop methodology and sample size with input from the Archaeology Branch and First Nations. Obtain Heritage Conservation Act Section 14 Heritage Investigation Permits and Section 12 Alteration Permits prior to mitigation and/or alteration of known archaeological sites.	Pre-construction, Construction	Contractor
16.7	Work with the Musqueam Indian Band and other interested First Nations in establishing a final design for the SFPR segment in the Glenrose / St. Mungo area focused on minimizing potential project related impacts on identified archaeological resources.	Pre-construction	MoT, Contractor
16.8	Work with the Musqueam Indian Band and other interested First Nations to further explore options/opportunities to establish appropriate First Nation recognition and/or interpretation measures in relation to the Glenrose / St. Mungo sites.	All phases	MoT
16.9	Undertake appropriate archaeological site impact mitigation measures, including construction monitoring and systematic data recovery (i.e., an archaeological excavation), at the St. Mungo and Glenrose Cannery archaeological sites and support these measures with field programs that involve the Musqueam Indian Band and other interested First Nations as appropriate. The proposed mitigation strategy will be based on an archaeological site management plan for the St. Mungo, Wet Site and Glenrose Cannery archaeological sites currently under development in conjunction with representatives of the Musqueam Indian Band.	All phases	MoT, Contractor
16.10	Report the discovery of previously undocumented archaeological sites that may come to light during the construction phase of the SFPR project to the British Columbia Archaeology Branch and interested First Nations. Engage an archaeologist to investigate and assess such sites under the terms and conditions of a Heritage Conservation Act permit.	All phases	Contractor
16.11	Provide opportunities for members of the Musqueam Indian Band and other interested First Nations to participate in field programs supporting the implementation of archaeological site mitigation measures.	All phases	MoT, Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
16.12	Notify and invite First Nations to participate in specified archaeological work that is to occur at identified archaeological sites within their respective asserted traditional territories.		
17.0 Heritage			
17.1	Ensure that the design, construction and operation of the proposed project is advanced in a way that avoids, or minimizes potential impacts to heritage buildings	All phases	Contractor, MoT
17.2	Consult with the Delta Heritage Advisory Commission and the Surrey Heritage Committee to define heritage interests and work with the Delta Museum and Archive to develop a photo record and inventory of potentially affected heritage houses.	Pre-Construction, Construction	MoT, Contractor
17.3	Prior to construction undertake pre-condition surveys with respect to heritage buildings, as further described in commitment 9.7.	Pre-construction	Contractor
17.4	Avoid, where practical and technically feasible, direct impacts to heritage buildings.	All phases	Contractor
18.0 Navigable Waters			
18.1	Obtain regulatory approval related to crossings of designated Navigable Waters pursuant to the Navigable Waters Protection Act (NWPA), including but not necessarily limited to, McAdam Creek, Collings Creek, Manson Canal, and Crescent Slough, prior to commencement of works.	Pre-Construction	MoT, Contractor
19.0 Socio-Economic			
19.1	Mitigate potential Project-related visual/lighting impacts through use of screening, fencing and landscaping in consultation with local government. Use dark-sky compliant lighting for the Project.	Pre-construction, Construction	Contractor
19.2	Manage potential impacts to emergency response services by: <ul style="list-style-type: none"> • Ensuring emergency response plans (including a Spill Response Management and Emergency Response Plan) are in place during the construction phase of the Project, and updated annually, at a minimum; • Consulting first responders in Traffic Management Plan development; and • Consulting with local fire departments to ensure adequate access. 	Pre-construction, Construction	Contractor

OWNER'S TABLE OF COMMITMENTS AND ASSURANCES – June 20, 2008

Ref	Objective Commitments and Assurances	Timing	Delivered By
20.0 Rail			
20.1	Avoid or minimize potential impacts from Project works and activities to rail corridors.	All phases	Contractor
20.2	Notify Transport Canada of project works as required under the <i>Notice of Railway Works Regulations</i> . Notify the public and affected stakeholders in accordance with the <i>Railway Safety Act</i> .	All phases	Contractor
20.3	Comply with Canadian transportation standards and regulations as well as the design specifications of the respective railway with regard to vertical and horizontal railroad clearance of new or upgraded infrastructure.	Pre-construction	Contractor
20.4	Minimize railroad closures during construction.	Construction	Contractor

Abbreviations and Acronyms

ALC	Agricultural Land Commission	EC	Environment Canada
ALR	Agricultural Land Reserve	EMP	Environmental Management Plan
Application	Environmental Assessment Application	ERP	Emergency Response Plan
BBMPC	Burns Bog Management Planning	MV	Metro Vancouver
Committee			
BMP	Best Management Practices	HC	Health Canada
CoD	Corporation of Delta	MAL	Ministry of Agriculture and Lands
CoS	City of Surrey	MoE	Ministry of Environment
CWS	Canadian Wildlife Service of Environment	MoT	Ministry of Transportation
Canada			
DFI	Delta Farmers' Institute	PM	Particulate Matter
DFO	Fisheries and Oceans Canada	ROW	Right-Of-Way
EAC	Environmental Assessment Certificate	SAP	Scientific Advisory Panel (of the BBMPC)

FEDERAL SCREENING REPORT
SOUTH FRASER PERIMETER ROAD
 July 2008

1.0 PROJECT IDENTIFICATION

Project Title: South Fraser Perimeter Road (SFPR)
Project Location: Delta and Surrey, British Columbia
EA Starting Date: December 4, 2006
RDIMS no.: 7036-26-2-2
CEAR File no.: 06-01-24060
NOC /CEAR Date: December 11, 2006

2.0 CONTACTS

Parties involved	Contact	Telephone	Fax
Federal EA Coordinator (FEAC):	Linda Sullivan Senior Program Officer, Pacific and Northern Region Canadian Environmental Assessment Agency	(604) 666-8784	(604) 666-6990
Responsible Authorities (RAs):	Cathy Hainsworth Environmental Assessment Project Manager, Highways and Borders Transport Canada	(613) 990-5792	(613) 990-9639
	Michael Engelsjord Biologist, Environmental Assessment and Major Projects Fisheries and Oceans Canada	(604) 666-8327	604-666-7907
Expert Federal Authorities (FAs):	Lisa Walls A/Manager, Environmental Assessment Section - Pacific and Yukon Environment Canada	(604) 666-2799	(604) 666-9107
	Carl Alleyne, Regional EA Coordinator, BC Region Health Canada	(604) 666-4693	(604) 666-5741
Province:	Paul Finkel Project Assessment Manager B.C Environmental Assessment Office	(250) 387-8745	(250) 356-6448
Proponent:	Malcolm Smith Environment Manager, South Fraser Perimeter Road BC Gateway Program	(604) 775-0351	(604) 775-0348

3.0 FEDERAL INVOLVEMENT

Pursuant to Section 5(1) of the *Canadian Environmental Assessment Act* (CEAA), a federal environmental assessment (EA) of this project was required because:

- Transport Canada (TC) is proposing to fund part of the project; and
- TC and Fisheries and Oceans Canada (DFO) may issue a permit, approval or other authorization described in the *Law List Regulations* of CEAA. TC may issue an approval under paragraph 5(1)(a) of the *Navigable Waters Protection Act* and DFO may issue an authorization under subsection 35(2) of the *Fisheries Act*.

As such, TC and DFO are responsible authorities in relation to the proposed project.

In addition, Health Canada (HC) and Environment Canada (EC) participated in the EA process as members of the provincial EA working group and as expert federal authorities providing advice, in accordance with their mandates, to the responsible authorities in accordance with section 12(3) of CEAA.

3.1 Notification of Other Jurisdictions

The proposed SFPR project was also subject to an EA process in accordance with the *British Columbia Environmental Assessment Act*. As such, the federal agencies have been active participants in the EA working group established by the BC Environmental Assessment Office for the purposes of reviewing the EA documentation related to SFPR.

The federal and provincial EA processes were coordinated in accordance with the *Canada-British Columbia Agreement on Environmental Assessment Cooperation* (2004).

4.0 PROJECT DESCRIPTION

The proposed SFPR involves the construction of a new four-lane divided highway with a combination of three intersections and five interchanges, located on the south side of the Fraser River. The road will extend from northeast of the existing Highway 17/Deltaport Way intersection, through the municipalities of Delta and Surrey, along the south bank of the Fraser River. The SFPR corridor will connect the existing Highways 99, 91, 1 and 15, and terminate just west of TransLink's Golden Ears Bridge crossing of the Fraser River and will also link the provincial highway system with the Port Kells Industrial Area, CN Intermodal yard, Bridgeview Industrial Area, Surrey Fraser Docks and Tilbury Industrial Area.

Additional detail on the project can be found in section 2 of the *SFPR Project Assessment Report*.

5.0 FEDERAL EA SCOPE

The CEAA gives the RAs the discretion on how they will scope the project to be assessed. This discretion is exercised reasonably, taking into consideration the details of each case based upon the decisions that trigger EA requirements. For the purposes of the SFPR project, the scopes of project identified by TC and DFO are included in subsection 5.1 and 5.2 of this document.

5.1 Scope of Project for Transport Canada

The scope of the project for TC included the construction, operation, modification, and decommissioning work in relation to the project, including the highway between Deltaport Way and the Fraser River Crossing at about 184th Street, and all associated structures and infrastructure essential to construct and operate the highway. This included fabrication of associated structures, such as bridges, pilings, structural fills, works in a water body, material handling and laydown areas, fuel storage facilities, sewage disposal, construction platforms, storage sites and all equipment and machinery.

5.2 Scope of Project for Fisheries and Oceans Canada

DFO's scope of project included the components of the proposed project, or activities required for the proposed project, that have the potential to result in unavoidable harmful alteration, disruption or destruction of fish habitat associated with watercourse crossings that require authorization under subsection 35(2) of the *Fisheries Act*; and any ancillary works and/or activities that are required solely for the purpose of undertaking the components of the proposed project that require authorization under subsection 35(2) of the *Fisheries Act*.

5.3 Assessment Type

The length of the proposed SFPR alignment is 39 km, from the existing Highway 17/Deltaport Way intersection to the site of the Golden Ears Bridge. The project will also include an additional 9.8 km of ancillary works (i.e. overpasses, frontage roads, accesses, etc.). As this length of the proposed road is less than the threshold described in the *Comprehensive Study List* regulations, the responsible authorities determined that a screening-level EA process would be required.

5.4 Scope of the Assessment

The factors considered in the environmental assessment, pursuant to section 16(1) of the CEAA, included the following:

- the environmental effects¹ of the Project, including the environmental effects of malfunctions or accidents that may occur in connection with the Project and any cumulative environmental effects that are likely to result from the Project in combination with other projects or activities that have been or will be carried out;
- the significance of the environmental effects referred to above;
- comments from the public that were received in accordance with CEAA and the regulations; and
- measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the Project.

The scope of factors that were considered in the environmental assessment, in relation to the scopes of project identified above, included potential effects (including cumulative effects) on the following environmental components:

- air quality and climate;
- surface water*;
- fish and fish habitat*;
- hydrogeology;
- vegetation, wildlife and wildlife habitat;
- Burns Bog;
- noise and vibration;
- contaminated sites; and,
- any effect of any change referred to on the factors listed above on: health and socio-economic conditions; physical and cultural heritage; the current use of lands and resources for traditional purposes by aboriginal persons; and any structure, site or thing that is of historical, archaeological, paleontological or architectural significance.

The environmental effects of the project on navigation are taken into consideration as part of the environmental assessment only when the effects are indirect, that is, resulting from a change in the

¹ As “environmental effects” is defined under the *Canadian Environmental Assessment Act* (CEAA)

* Denotes environmental components considered by Fisheries and Oceans Canada, in relation to the scope of project it has identified in section 5.1 of this document.

environment affecting navigation. For this environmental assessment only direct effects were identified; therefore, the effects of the project on navigation are not addressed in the environmental assessment. Any measures necessary to mitigate direct effects will be included as conditions of the *Navigable Waters Protection Act* approvals². Approvals from TC will be required prior to construction for the bridge crossings at McAdam Creek, Collings Creek, Manson Canal and Crescent Slough, as these are 'named' works within the meaning of the *Navigable Waters Protection Act*.

6.0 DESCRIPTION OF EXISTING ENVIRONMENT

Much of the proposed SFPR alignment is located in areas described as industrial and agricultural in nature, with the exception of some adjacent upland communities in Delta (Ladner and portions of north Delta where the route parallels the shoreline of the Fraser River) being residential. The BC MOT has described the area east of the Port Mann Bridge, the hillsides of Surrey above the proposed route (the neighbourhoods of Fraser Heights and Anniesville) as also residential. Within the project area, areas of natural importance also exist. These include Burns Bog and the Fraser Heights wetland area.

Detailed descriptions of the existing environment are provided in sections 8 through 19 of the *SFPR Project Assessment Report*. Additional information is also available in the Technical Appendices (2006).

7.0 ENVIRONMENTAL EFFECTS AND MITIGATION MEASURES

The CEAA requires that the EA identify the adverse environmental effects that could result from the project, as well as measures that are technically and economically feasible and that would mitigate any significant adverse environmental effects of the project. The potential effects of the proposed project and the mitigation measures identified to mitigate these effects are summarized in Table 7-1. Additional details on the environmental analysis are provided in the *SFPR Project Assessment Report* and the following supporting documentation:

- Application for an Environmental Assessment Certificate for the South Fraser Perimeter Road Project and Technical Appendices (October 2006)
- Draft Habitat Compensation Plan (February 2007)
- SFPR Wildlife Crossing Mitigation Plan (April 2007)
- Stormwater Management Plan (July 2007)
- Zone of Influence Effects for the SFPR Corridor (August 2007)
- BC MOT response to EC (dated September 21, 2007)
- Design Overview: Lagg Pond Ecosystem Complex (LPEC) and Double Ditch System (DDS) Features Proposed for Selected Locations on the Edge of Burns Bog (November 2007)
- Burns Bog Hydrology Planning Tool (April 2008)
- Draft Burns Bog Hydrology Workplan (April 2008)
- SFPR Revised Alignment Map (April 2008)
- Modelling of Particulate Matter Deposition in Burns Bog from SFPR Emissions (May 2008)
- Draft Air Quality Management Plan (May 2008)
- Calculation of the Hydrochemical Effect of Sequential Additions of Granitic Dust to Type 1 and Type 2 Water at Burns Bog, British Columbia (June 2008)
- Objectives for Hydrology Mitigation for the SFPR Alignment Around Burns Bog (June 2008)
- Cumulative Effects Assessment (June 2008)
- Table of Commitments and Assurances (June 2008)

² Four navigable waterways have been identified along SFPR: McAdam Creek, Collings Creek, Manson Canal and Crescent Slough.

Table 7-1: Environmental Effects and Mitigation for the Construction and Operation Phases of the Project

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
AIR QUALITY AND CLIMATE		
<p>Dust and gaseous emissions associated with Project works include clearing, excavation and grading, placement of pre-load fill materials, operation of equipment etc.</p> <p><i>* Mitigation specific to avoiding dustfall into Burns Bog is provided in the Burns Bog section of this table</i></p> <p>Project construction and operation may cause an increase in emissions of CACs and GHGs. An increase in GHG emissions could have effects on climate.</p> <p>An increase in air emissions could cause impacts to human health.</p>	<ul style="list-style-type: none"> • Construction works and operations for the Project will be conducted in compliance with environmental permits and approvals relating to air quality. • The BC MOT will revise (for September 2008) and implement the Air Quality Management Plan during construction activities, including site preparation. • The BC MOT will ensure that an Environmental Monitor is on-site for the construction phases of the project to monitor, evaluate, and report on construction activities, the effectiveness of mitigation measures, and to make on-site decisions to avoid/respond to potential environmental effects, including temporary stop work orders if necessary. • The project will be designed and managed to ensure optimum traffic flow conditions during operation. • Before construction, the BC MOT will develop an Air Quality and Dust Control Plan for the construction phase of the project and allow a minimum of 30 days for review by federal and provincial agencies prior to construction. The plan will: <ul style="list-style-type: none"> - Identify all technically and economically feasible mitigation measures that will be implemented to prevent generation and transmission of dust during the pre-load and construction phases of the project. - Commit to the best available, known and effective, measures for mitigating construction related air emissions, including diesel particulate matter (PM), as identified by relevant regulatory agencies; - Include an anti-idling policy for construction equipment; - Commit to fugitive dust minimization strategies, such as wheel wash, sweeping, use of wind screens, watering and covering storage piles or unpaved surfaces and dust suppression techniques on roads; and - Identify site-specific considerations, where applicable, such as proximity to sensitive environmental and human receptors. • To mitigate against potential impacts of fugitive dust emission on local air quality during construction activities, best management practices³ (BMPs) will be applied including, but not limited to the following: <ul style="list-style-type: none"> - Avoid double handling of fill and stockpile materials and cover loads containing fine materials. - Stockpiled materials will be protected by wind screens or surfaces covered with polyethylene sheeting or geotextile, ensuring that these protective structures are firmly anchored. Alternatively, water may be applied to the stockpiles. - Contain dust generated during the potential operation of a milling machine. - Use water trucks equipped with spray bars and suitable control apparatus to dampen temporary and permanent unpaved access routes and staging areas at regular intervals [Note: in sensitive areas adjacent to Burns Bog, mitigation will not compromise the identified hydrology objectives]. - Limit the time that unpaved surfaces are exposed. - Regularly clean roadways and remove debris. The frequency of roadway cleaning will be defined in an operational environmental management plan to be developed prior to opening of the facility. Details on how sweeping of paved 	<p>NLS</p>

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
	<p>roadway will be conducted to avoid re-suspension of particulate matter will be included in the revised AQMP.</p> <ul style="list-style-type: none"> - Speed limits on unpaved roads will be limited to 15 km/hr, where practical. - Provide tire wash facilities to minimize tracking of road dust onto paved roads. - Cover haul/dump truckloads that are transporting fine-grained materials, particularly when moving to off-site locations. <ul style="list-style-type: none"> • To mitigate against potential impacts of gaseous emissions on local air quality during construction activities, BMPs, including but not limited to the following, will be used: <ul style="list-style-type: none"> - Operate equipment at optimum rated loads. - Schedule equipment that operates most efficiently and with the lowest emissions. - Follow routine equipment maintenance procedures. - Development of protocols for turning off construction related equipment and vehicles, when not in active use, in order to minimize emissions associated with idling. - Ensure that all heavy-duty diesel on-road vehicles (i.e., licensed vehicles, such as dump trucks) are in good working order while operating on the project site and the contractor can demonstrate that all vehicles meet a maximum exhaust opacity requirement of 10%, as measured by the SAE J1667 test procedure. • All heavy-duty diesel on-road vehicles and other diesel construction equipment must use ultra-low sulphur diesel fuel (maximum 15 ppm sulphur content), or use catalyzed particulate traps or a diesel oxidation catalyst. 	
SURFACE WATER QUALITY AND QUANTITY		
<p>Effects on water quality as a result of sediment and erosion and/or spills of hazardous materials during construction.</p> <p>During operation, increased areas of impervious surfaces may increase surface water quantity.</p> <p>Storm water runoff from project operation may contain suspended solids, oils and grease, heavy metals and other</p>	<ul style="list-style-type: none"> • Construction works and operations for the Project will be conducted in compliance with environmental requirements and BMPs in order to avoid impacts to water quality. • Apply provincial water quality guidelines and objectives in evaluation of the water quality samples collected before, during and after construction. • Storm water management infrastructure will be designed, constructed and maintained to control sediment generation, act as a filter for sediment and other deleterious substances, and address concerns related to increased rates of storm water runoff. • A Surface Water Quality and Sediment Control Plan will be developed before project construction that will include procedures for monitoring water quality and for avoiding potential construction related impacts on water quality. • The following general BMPs relate to management and prevention of contaminated materials from entering surface water drainage and watercourses: <ul style="list-style-type: none"> - Prior to any equipment leaving the construction area, clean it in designated areas that are equipped to prevent contaminated water from entering a natural watercourse. - Contain and remove accidental spills of soil or other material on roadways or in gutters. - Install impervious secondary containment for fuel or chemical storage areas. - All refuse, including inorganic and chemical products, shall be disposed of in such a way that it will not directly or indirectly pollute groundwater or any watercourse. 	NLS

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
<p>materials associated with motorized vehicles.</p> <p>Increased surface runoff and reduced infiltration from project operation may result in increased suspended solids, nutrients, metals, and organic compounds.</p>	<ul style="list-style-type: none"> - Keep fuelling stations, fresh concrete and concrete equipment wash water, out of stormwater systems and greater than 30m from a watercourse riparian protection area. • BMPs to be applied to reduce the risk of erosion processes occurring and sediments entering watercourses downstream of Project activities include but are not limited to the following: <ul style="list-style-type: none"> - Plan Project works to occur during periods of minimal precipitation. - Minimize disturbance of vegetation and soil (i.e., grading, benching and scarification), by marking work boundaries. - Minimize areas of exposed soil. Excavated materials will be placed as far as possible from a watercourse channel. - Use specialized mats or pads to minimize soil disturbance and erosion within wetland areas and other similar environmental sensitive areas. - Minimize the length and steepness of slopes to reduce the risk of erosion and sediment loss. - If discharging water onto land, ensure that is dissipated over a well-vegetated area, temporary riprap or other stable surface material to prevent soil erosion. - Construct stable, non-erodible ditches, inlet and outlet structures. - Immediately stabilize and seed/revegetate newly disturbed areas following the completion of specific Project activities. - Replanting of disturbed areas is to be undertaken using native plant species. - Riprap to be placed in or adjacent to watercourses or wetlands should be free of dirt and other contaminants. - Sediment control fencing (or equivalent) will be used as sediment and debris control measures around Project works. - Soil excavation stockpiles will be contained within berms and silt fences and/or covered with polyethylene to prevent water and wind erosion. - Properly stabilize site entrances with provisions to prevent tracking of mud and debris off-site. - Installed cross-slope swales, ditches and culverts, to enhance drainage and to prevent erosion of excavated materials. - Trench-less technologies (i.e., directional drilling outside the channel and floodplain and below the streambed) should be considered for pipelines and other utility crossings of watercourses. - Regularly assess the function of erosion control devices and correct any deficiencies. - Minimize vehicle activity on disturbed site surfaces during and after wet weather • To prevent the clogging of granular fill material over time, the BC MOT will consider the performance of road bed and fill materials during the development of the design of the road sediments near Burns Bog. The BC MOT will also include additional seasonal water quality data in the development of the water quality monitoring program. 	
FISH AND FISH HABITAT		
<p>Potential effects to fish and fish habitat loss or alteration of fish habitat; water quality degradation; altered drainage patterns; loss or</p>	<ul style="list-style-type: none"> • The BC MOT will ensure that all works and activities associated with the construction, operation and maintenance of the project is conducted in compliance with the <i>Fisheries Act</i>. This includes implementing mitigation measures and best management practicesⁱⁱⁱ to ensure that the project does not cause any unauthorized harmful alteration, disruption or destruction of fish habitat, that the project does not cause any harm or mortality to fish, and that the project does not cause or result in the deposit of a deleterious substance of any type, including sediment, into a watercourse that is frequented by fish. 	NLS

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
<p>impairment of food and nutrient supply; disruption of fish passage etc.</p> <p>Potential impacts on fish habitat due to changes in volume, rate and quality of storm water runoff.</p>	<ul style="list-style-type: none"> • The BC MOT will obtain authorization under subsection 35(2) of the <i>Fisheries Act</i> for any unavoidable harmful alteration, disruption or destruction of fish habitat prior to relevant construction works or activities. The proponent will develop and construct fish habitat compensation measures that offset all project impacts to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by DFO and in accordance with any ss. 35(2) <i>Fisheries Act</i> authorizations. • All reasonable measures will be taken to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances. • Appropriate measures will be applied to adequately mitigate the effects of the creation of impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan for the project. • Clearly show all watercourses (including rivers, streams, creeks, ditches, channels, wetlands and ponds), seasonally flooded areas, and existing vegetation within 30 metres of the edge of any watercourse on relevant construction drawings. • Conduct vegetation management as necessary to maintain predominantly native component of riparian habitat compensation areas. • Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements. <ul style="list-style-type: none"> - Appropriate best management practices³ for protection of the aquatic environment will be applied to works or activities conducted in or near watercourses. • Implementation and maintenance of storm water management infrastructure such that it meets the performance objectives in the Storm water Management Plan. • Maintenance activities will be conducted in accordance with best management practices³ to protect the aquatic environment. 	
HYDROGEOLOGY		
<p>Construction and operation may interfere with the existing water table height, velocity of groundwater flow, seasonal variations and relationships with</p>	<ul style="list-style-type: none"> • Ensure continuous grade on culvert pipes to prevent loss of groundwater flow into road material. • Design and construction of drainage structures, as well as the development of operating and maintenance protocols, will include all reasonable measures to ensure that drainage structures do not leak and water retention at the drainage structure inlets is reduced. • Develop and implement a Surface Water Quality and Sediment Control plan to identify procedures for protecting groundwater quality in the study area (mitigation specific to hydrogeology in Burns Bog is stated in a separate section). • Install vertical flow barriers in the road fill, and berms in the shallow roadside depressions, to help maintain groundwater 	NLS

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
<p>surface water conditions.</p> <p><i>* Mitigation specific to avoiding hydrology impacts within Burns Bog is provided in the Burns Bog section of this table</i></p> <p>Potential impact to drinking water wells.</p>	<p>flow patterns and levels.</p> <ul style="list-style-type: none"> • To mitigate potential impacts on the Fraser Heights Wetland habitats, an elevated bridge structure will be constructed over wetland areas. • During the design phase, BC MOT will conduct a study to assess the effect of pile driving on the overall hydraulic conductivity of saturated sediments for the bridge work over the Fraser Heights Wetland. • Storm water management infrastructure will be designed, constructed and maintained to control sediment generation and act as a filter for other deleterious substances that could otherwise adversely affect groundwater resources, particularly in wetland areas. Objectives for hydrology mitigation around Burns Bog are provided separately, under the “Burns Bog” heading of this table. • Implement best management practices³ to avoid potential effects on water wells that could effect water quality and/or water supply . • Sample water from potentially impacted drinking water wells to monitor potential adverse effects to water quality during construction and operation phases of the project. • Well water quality data will be provided to the local health authority for review. • In the unlikely event that impacts to a water well during construction or operation of the project cannot be avoided, BC MOT will take steps, in consultation with the property owner, to address the impact and ensure access to potable water. 	
VEGETATION, WILDLIFE AND WILDLIFE HABITAT		
<p>Potential impacts to wildlife and wildlife habitat, including values related to SARA species, migratory birds and wetlands.</p> <p>The following listed wildlife species or their critical habitat may be affected by</p>	<ul style="list-style-type: none"> • Ensure that the construction works and operations for the Project are conducted in compliance with environmental requirements, including the requirements of the <i>Species at Risk Act</i> and <i>Migratory Birds Convention Act</i>. • Throughout the design and construction phases of the project, the BC MOT will ensure that measures are taken to avoid or lessen effects of the project on listed wildlife species and their critical habitat and that potential effects that could occur are monitored. All mitigation and monitoring measures will be taken in a manner that is consistent with applicable recovery strategy and actions plans. • During the design phase, the BC MOT will finalize its determination of the type and location of sound barriers to be constructed along the perimeter of Burns Bog. For the southwestern alignment (along Crescent Slough), this design will include the construction of a solid sound barrier, or a barrier that will provide equivalent mitigation. BC MOT will ensure on-going consultation with TC, EC, BC MOE, and other IAERC members as appropriate, during design regarding the proposed type and location of sound barriers to be installed around Burns Bog. • The design, construction, and operation of the project will avoid, where practical and technically feasible, impacts to 	NLS

³ In accordance with the requirements of ss. 79(1) of the *Species at Risk Act* (SARA), TC provided written notification to EC on November 2, 2007, of the project’s potential to affect a listed these wildlife species or their critical habitat.

Potential Effects	Mitigation Measures ¹	Residual Effects ¹
<p>proposed project: Barn Owl (<i>Tyto alba</i>, western population); Western Screech Owl (<i>Megascops kennicottii kennicottii</i>, western population); Red-legged Frog (<i>Rana aurora</i>); Western Toad (<i>Bufo boreas</i>); Pacific Water Shrew (<i>Sorex bendirii</i>); and, Streambank Lupine (<i>Lupinus rivularis</i>)³.</p> <p>Potential impacts to wildlife, during construction and/or operation, include habitat loss/alteration, changes in wildlife movement patterns, and wildlife mortality due to vehicle collisions.</p> <p>Impacts to vegetation will include vegetation loss during construction and a potential for exotic species to be introduced after construction.</p>	<p>vegetation and wildlife.</p> <ul style="list-style-type: none"> • To avoid and, where necessary, mitigate potential impacts to vegetation, wildlife and wildlife habitat, the BC MOT will prepare and implement a Wildlife and Habitat Management Plan, Habitat Compensation Plan, Mitigation and Monitoring Plan, Zones of Influence report, and Wildlife Crossing Plan. • Mitigation measures to avoid and minimize impacts to wildlife during construction and operation, as will be identified in the Wildlife and Habitat Management Plan, will be implemented. This will include planting buffer zones alongside native species in disturbed areas associated with road construction to minimize impact on plants and communities and minimize the likelihood of edge effects and infestation of invasive plant species. • Work with MOE to develop and implement Mitigation Monitoring Plans for other wildlife and vegetation including but not limited to: small mammals, raptors, red and blue listed plants and amphibians and reptiles. • Develop and implement an Invasive Species Management Plan to address potential effects of the project related to the introduction of exotic plant and animal species to the project corridor. • Minimize potential impacts to native vegetation communities by implementing BMPs for weed species management. • Use data from the BC MOT administered Wildlife Accident Reporting System, or an equivalent system, to identify areas of increased wildlife collisions and to monitor direct effects on wildlife. • Consult with the Canadian Wildlife Service (of EC) to develop and implement a Mitigation Monitoring Plan to monitor and assess the effectiveness of measures proposed to avoid or mitigate potential effects on Sandhill Crane. The Plan will identify: species habitat requirements; existing conditions in the project area; potential project related effects and mitigation; core indicators for assessing the effectiveness of mitigation; proposed study methodology and data interpretation and reporting protocols. • Additional mitigation measures to be instituted during Project activities to minimize adverse environmental impacts to vegetation, wildlife and wildlife habitat will include, but are not limited to the following: <ul style="list-style-type: none"> - During detail design, footprint impacts on vegetation and wildlife ESAs will be minimized, including impacts to red and blue-listed plant communities, critical habitat areas for Pacific water shrew, known nest locations and wetlands. - Management of highway ROW and shoulder to limit the presence of raptor prey species, and therefore, reduce the risk of collisions between raptors and vehicles. - Undertake rare plants surveys, prior to any potential impact from the commencement of construction activities, to assist in minimizing impacts to rare plant species present within the Project area and identify construction exclusion zones to avoid impacts to such areas. - Conduct nest surveys immediately prior to Project works during the breeding season to determine the presence of nests within the Project area and assist in avoiding impacts to nests and/or identifying timing windows for construction and/or setbacks/buffers. - Conduct wildlife salvage operations, to avoid incidental mortality, for sensitive species potentially present in identified areas prior to being altered by Project activities. These include areas, such as the Fraser Heights Wetland, where there 	

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
	<p>is the potential for protected species (red-legged frog and Pacific water shrew) to be present.</p> <ul style="list-style-type: none"> - Habitat clearing around sensitive features such as eagle/raptor nests, provincially-listed plant communities, or riparian areas, will be restricted in spatial extent or timing - Keep temporary works, staging and storage areas to a minimum and at an appropriate distance from watercourses and environmentally sensitive areas. - Identify vegetative habitat and ESAs on design drawings and delineated in the field by marked flagging tape or fencing. - The clearing of vegetation will be restricted during the critical bird breeding period, typically between March 15 and July 31. The Vegetation and Wildlife Habitat Management Plan will have site-specific timing windows, as each timing window varies on the species present. - Construction activities will be carried out as quickly as possible to minimize the visual or noise disturbance to wildlife. - Areas where wildlife may be present will be off-limits to Project personnel and equipment, to the extent possible, to avoid sensory disturbances to wildlife. - Temporary fencing will be installed to limit access to sensitive habitats and to prevent wildlife from entering Project works areas. <ul style="list-style-type: none"> • Undertake measures to minimize impacts to wildlife associated with lighting required for potential night time construction including: using directional lighting in order to limit light spill into sensitive areas and using only the amount of lighting necessary. <ul style="list-style-type: none"> - Re-vegetation adjacent to the Project Right-of-Way will not include plant species preferred by black-tailed deer and barn owl to limit the attractiveness of roadside vegetation to wildlife and their potential for collisions with vehicles. • Construct approximately 80 wildlife crossings along the corridor that will include a 450 m bridge structure over a wetland area in Surrey, bridges over watercourses through North Delta, and the construction of low-elevation bridges and small mammal structures. The number and location of wildlife crossings will be identified in the final Wildlife Mitigation Crossing Plan. • For residual effects on wildlife and wildlife habitat that cannot be avoided (as identified in the draft Habitat Compensation Plan) and that are not demonstrated to be effectively mitigated, through the Wildlife and Vegetation Mitigation Monitoring Plan, the BC MOT will consult with relevant provincial and federal agencies to develop appropriate compensation measures where compensation is required. Compensation measures may include a combination of land acquisition, support for conservation programs, and habitat restoration. 	
BURNS BOG		
<p>Potential effects to ecological values associated with Burns Bog related to loss of habitat, air emissions and hydrology</p>	<ul style="list-style-type: none"> • BC MOT will revise the draft Hydrology Work Plan to include (among other recommendations): site-specific information on hydrology mitigation and monitoring; roles and responsibilities for data collection, management, and analysis in relation to the monitoring program; and, roles and responsibilities for maintaining the hydrology mitigation following the monitoring and follow-up period. This document will be finalized and approved by Transport Canada prior to commencement of pre-load activities around Burns Bog. 	NLS

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
impacts.	<ul style="list-style-type: none"> • The hydrology monitoring program, to be documented in the final Hydrology Work Plan, will identify the number of observation locations (and their construction methods) to be monitored and the frequency and duration of the sampling that will be conducted. • Consult with Metro Vancouver, Corporation of Delta, Environment Canada, the Burns Bog Management Planning Committee, and Scientific Advisory Panel to ensure design, construction, and operation of the project complements long-term management objectives established for the Burns Bog Ecological Conservation Area. • The design, construction and operation of the proposed project will be advanced in ways that avoid potentially significant impacts to hydrological and ecological values associated with Burns Bog, (i.e., alignment refinements to avoid ecological and hydrological values, development of hydrological mitigation that meet the hydrologic objectives identified). • Hydrology mitigation infrastructure will be designed, constructed, and operated to mitigate potential effects of the project on the hydrology of Burns Bog in a way that meets the following performance objectives. In further designing this mitigation, additional consultation will take place with TC and EC: <ul style="list-style-type: none"> - Site-specific solutions – The design, construction and operation of hydrology mitigation will be based on, and take into account, site-specific conditions. - Compatibility between highway water management and bog water management – Providing for active water level controls in the Bog that are independent of SFPR-related water management. - Prevention of mineral migration into the Bog – Where indicated, providing a low permeability barrier between the SFPR highway ditch and the lagg ponds/ditches by: using material to construct the berm that supports appropriate vegetation on the berm and prevents the introduction of mineral material into the Bog; and maintaining hydraulic gradients so that Type 1 bog waters flow toward the highway at all times. - Resilience – Providing a design that is sufficiently robust to maintain and actively manage water levels under average and extreme conditions and if Bog conditions change. - Highway and mitigation construction does not preclude future restoration of Burns Bog – Providing flexibility of design that allows, for example, for future water control structures that allow for raising and lowering of water levels as part of future bog restoration. - Holistic design – Hydrology mitigation concepts are designed in way that ensure they will be compatible with, and help achieve multiple, mitigation requirements. • Develop, for review and comment by federal and provincial agencies, construction and post-construction monitoring requirements related to Burns Bog including, but not limited to, those identified in the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007). Monitoring requirements with respect to Burns Bog will include but not be limited to those relating to: air quality, water quality, water levels, red-listed plant communities, and wildlife. • BC MOT will develop a drainage model/water balance model for Burns Bog to support the planning of infrastructure to mitigate potential impacts on hydrology and support implementation of the Burns Bog Ecological Conservancy Area Management Plan. 	

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
	<ul style="list-style-type: none"> • Prior to the commencement of pre-load activities around Burns Bog, BC MOT will finalize and submit to TC for approval a Burns Bog Air Quality Management Plan that describes how potential effects from the deposition of particulate matter to Burns will be mitigated and monitored during all stages of design, construction and operation of the road on Burns Bog. This plan will include, specific to areas around Burns Bog: <ul style="list-style-type: none"> - All technically and economically feasible mitigation measures that will be implemented to prevent generation and transmission of dust during the pre-load and construction phases of the project. - Best management practices that take into consideration measures identified in the EC guidance document, <i>Best Practices for the Reduction of Air Emissions From Construction and Demolition Activities</i> (March 2005). - Include an air quality monitoring program with thresholds, which if exceeded, will trigger the implementation of additional mitigation and corrective measures that may include temporary stop work orders; - Identify the roles and responsibilities for the on-site environmental monitors; - Commit to fugitive dust minimization strategies, such as wheel wash, sweeping, use of wind screens, watering and covering storage piles or unpaved surfaces and dust suppression techniques on roads; and - Identify site-specific considerations, where applicable, such as proximity to sensitive environmental and human receptors. • A minimum of 4 months of baseline data collection (particulate/water chemistry around Burns Bog), will be collected between July and October 2008, prior to the commencement of pre-loading activities around Burns Bog (i.e., north of the Highway 99 interchange and west of Nordel Way). Following the collection of this information, The BC MOT will meet with TC and EC to discuss the baseline monitoring information collected and the approach for continued baseline data collection (if required). • BC MOT will not commence pre-load activities around Burns Bog, including areas north of the Highway 99 interchange and west of Nordel Way, until TC (and other decision-making authorities as required) has reviewed and is satisfied with the final Hydrology Work Plan, the status of the hydrology mitigation design, and the Burns Bog Air Quality Management Plan. 	
NOISE AND VIBRATION		
<p>Noise and vibration generated by construction related activities.</p> <p>Vehicle noise will be generated during</p>	<ul style="list-style-type: none"> • Specific mitigation practices and locations for mitigation measures to address potential effects of construction related noise will be identified in the Noise and Vibration Management Plan, to be developed prior to construction and provided for review and comment to the Corporation of Delta, City of Surrey, Health Canada, TC, and other interested stakeholders. Mitigation measures will include an appropriate combination of quiet pavement, coordination of traffic control signals, noise barrier walls, and tree planting/replacement. • BC MOT will construct a roadside noise barrier to reduce noise levels at the location of the Iqra School. 	NLS

⁴ MoT, 1993. Revised policy for mitigating the effects of traffic noise from freeways and expressways. Developed by Wakefield Acoustics Ltd. for the BC Ministry of Transportation.

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
operation.	<ul style="list-style-type: none"> • Best management practicesⁱⁱⁱ to mitigate against construction related noise and vibration impacts, to be identified in the Noise and Vibration Management Plan, in areas with sensitive receptors such as residential development, include the following. <ul style="list-style-type: none"> - Whenever possible, construction activities will be carried out within the hours normally permitted by the noise bylaws of the municipalities involved. - Orient stationary equipment emitting elevated noise levels, towards existing noise, natural terrain or other large objects. - Minimize the use of back-up beepers, particularly during the evening, as long as compliance with regulatory requirements is maintained. - Turn off idling equipment when not in use. - Turn off heavy equipment when inactive for more than 30 minutes. - Implement tree planting and landscaping to mitigate potential visual, noise and air quality impacts. - Select equipment or processes that have had additional noise control features, such as better mufflers and enclosures on diesel or gas powered equipment, exhaust silencers on air tools etc. - If pile-driving activities are proposed, use longer duration, quieter methods (e.g., drop hammers) rather than shorter duration louder methods (e.g., diesel hammers) to minimize noise. For extreme noise impacts, consider a close fitting or enclosure shroud to contain the noise emission from the pile and hammer. - Use the quietest piece of equipment that is available to conduct a task. - If only one piece of equipment can conduct the task, and it has high noise emissions, limit its use as much as possible. - Install approved noise fences where needed to reduce noise reaching sensitive residences and facilities. The need for noise mitigation will be determined through consideration of predicted noise from highway operations against the BC MOT noise policy (1993)⁴. Additional details regarding the type and location of noise mitigation to be implemented will be identified in the Noise and Vibration Management Plan - Ensure machinery is in good condition prior to construction and that contractors do not utilize excessively noisy equipment. Carry out regular maintenance on all equipment, including lubrication and replacement of worn parts, especially exhaust systems. • BC MOT will conduct noise monitoring at the baseline sites during the first year of operation, to assess the effectiveness of mitigation measures with a commitment to further mitigation, consistent with the MoT noise policy (1993), if necessary. • BC MOT will perform pre-construction surveys to document the existing state of buildings and facilities in the vicinity of SFPR construction activities against which post-construction condition surveys will be carried out to assess any vibration impacts to buildings and facilities as a result of SFPR construction. Information collected from these surveys will assess the magnitude of impacts potentially resulting from construction related vibration and guide any repairs and/or compensation that may be required. • BC MOT will monitor ground vibrations, as per standard geotechnical BMPs, adjacent to buildings to confirm that vibration levels are within a range that is expected to avoid construction related vibration impacts to adjacent buildings. 	

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
CONTAMINATED SITES		
<p>Potential impacts to human health and the environment related to the management of both known contaminated sites as well as those that may be identified during project development.</p>	<ul style="list-style-type: none"> • Potential site contamination will be investigated and managed in compliance with the Contaminated Sites Regulation (<i>Environmental Management Act</i>) during all stages of project development including property acquisition, design and construction. Should contaminated groundwater be identified along the route, measures to control/mitigate the potential for impacts to surface water will be integrated into future storm water design. • Contaminated site investigations will be performed on sites where pile driving is proposed. The potential impact of pile driving on vertical contaminant migration will be assessed by reviewing site characteristics, including vertical hydraulic gradients, the level and nature of contamination (if present), and the type of soils that the piles will be driven through. As required, mitigation measures may include; avoidance, contaminated soil removal and treatment and/or groundwater collection and monitoring. • Undertake risk assessment and remediation activities, as required, and manage potential contamination in compliance with the provincial <i>Environmental Management Act</i> and Contaminated Sites Regulation. • During the design phase, BC MOT will prepare a construction health and safety plan that includes provisions for the removal of residential USTs and disposal of any tanks and contaminated soils. 	NE
ARCHAEOLOGY ^{iv}		
<p>Potential environmental effects to areas with known archaeological resources in the project corridor.</p> <p>Potential for known archaeological sites to be impacted by changes in groundwater flow patterns.</p>	<ul style="list-style-type: none"> • BC MOT will ensure that the design, construction and operation of the Project is advanced in a way that avoids, or minimizes potential impacts to known archaeological sites, including the Nottingham Farm, St. Mungo and the Glenrose Cannery sites, as well as other sites that may be encountered during project planning and development. Mitigation will include the use of an overpass at St. Mungo/Glenrose site and micro-siting of piers associated with this structure to minimize impacts to archaeological resources, and site capping to reduce impacts to midden. • Sites with known archaeological features will follow mitigation measures in compliance with the provincial <i>Environmental Management Act</i> and the <i>Heritage Conservation Act</i> to minimize or prohibit the occurrence of adverse effects on archaeological features within the project area. • BC MOT identified the impact on local groundwater flow patterns at known archaeological sites was low. No specific mitigation was identified additional to the mitigation identified for potential changes in hydrology. 	NLS
CURRENT USE OF LANDS/RESOURCES FOR TRADITIONAL PURPOSES		
<p>Potential impact to access to fisheries and</p>	<ul style="list-style-type: none"> • BC MOT will work with the Tsawwassen First Nation (TFN) to maintain appropriate access for TFN members to Burns Bog to facilitate TFN's harvesting rights pursuant to the Tsawwassen Final Agreement. 	NLS

Potential Effects	Mitigation Measures ⁱ	Residual Effects ⁱⁱ
wildlife resources in project corridor.	<ul style="list-style-type: none"> • Provide opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band. • Participating First Nations will be provided an opportunity to provide input into post-EA documentation including the Fisheries Habitat Mitigation and Compensation Plan and Wildlife and Habitat Management Plan. As members of the IAERC, other post-EA documents will also be available for input. • Provide final designs for storm water management infrastructure to relevant First Nations for review and comment in order to verify that the proposed infrastructure achieves agreed upon performance measures for the storm water management infrastructure. 	

NOTES:

- ⁱ As the proponent, the BC MOT is responsible for the implementation of mitigation measures identified in Table 7-1. TC will be provided with reports on the status of the implementation of mitigation on a monthly basis, or at a frequency otherwise determined by TC in writing.
- ⁱⁱ Residual impacts have been identified in the Table as either “NLS” (not likely significant) or “NE” (no likely effect). This determination was made taking into consideration the implementation of mitigation and the information provided on the characteristics of the residual effects provided in the *SFPR Assessment Report* and its supporting EA documentation.
- ⁱⁱⁱ Best Management Practices referred to in this table are documented in the design build standard specifications for highway construction. Section 165 Protection of the Environment (BC MOT, 2006) or best management practices for highway maintenance activities (BC MOT, 2004). All project work will be carried out in accordance with these documents.
- ^{iv} Effects related to human health, socio-economy, archaeology, and the current use of lands and resources for traditional purposes have been assessed in this document taking into consideration the federal scope of assessment and the definition of “environmental effect” under the *Canadian Environmental Assessment Act*. Further consideration of these factors is provided in the *SFPR Project Assessment Report*.
- ^v Human health effects and mitigation have been incorporated into the sections on air quality, noise, and water wells/ groundwater quality and quantity.

7.1 Environmental Effects of Accidents and Malfunctions.

The proponent considered the potential adverse environmental effects of accidents and malfunctions during the EA process. Details of the analysis can be found in section 21 of the *SFPR Project Assessment Report*. The following summarizes the potential accidents and malfunctions that were identified during the assessment:

- Fire as a result of construction activities or vehicle accidents (during construction or operation);
- Accidental release of concrete (un-cured and dry concrete) during construction, which may increase pH levels to potentially toxic levels, affecting salmonids, forage fish and food;
- Accidental spills of toxic/hazardous materials into watercourses from construction or vehicle accidents during construction or operation, which may be acutely or chronically toxic to salmonids, forage fish species and food resources;
- Release of sediment into nearby waterways, which may degrade water quality and affect the ability of fish to find prey, clog fish gills, reduce fish growth rates and decrease resistance to disease (particularly for juvenile salmonids);
- Accidental damage to utilities (e.g. buried natural gas pipes and telecommunications cables), which may constitute a safety hazard and cause disruption to residential, commercial and industrial services;
- Vehicle accidents during construction and operation may occur, resulting in personal injury, as well as potential spills of toxic/hazardous materials;
- Accidents and/or malfunctions associated with the inappropriate operation of machinery or equipment may cause disturbances to environmentally sensitive habitat or lead to accidental mortality of animals;
- Structural failure in a culvert, ditch or detention pond may result in localized flooding, erosion, sedimentation and/or discharge of deleterious materials

Mitigation to minimize the potential for, and the potential severity of, the environmental effects of accidents and malfunctions are included in Table 7-1 and are listed in section 21.3 of the *SFPR Project Assessment Report*. These include mitigation measures for unanticipated spills, sediment discharges, damages to utilities, and vehicle accidents. With the implementation of these mitigation measures, the responsible authorities have concluded that significant adverse effects of accidents and malfunctions are not likely to occur.

7.2 Effects of the Environment on the Project

The proponent submitted a revised assessment of the effects of the environment on the project section of the Application in March 2007. As required by CEAA, this document considers the potential for environmental conditions to impact the proposed Project, and the predicted effects of those environmental conditions. The environmental conditions that were considered in the assessment included: seismic activity and slope stability (ground failure) hazards, implications of climate (including sea level) changes, erosion, and flooding. Measures to mitigate against potential effects of these environmental conditions, should they occur, will be integrated into the design of the project. The project will be designed to meet the appropriate performance specifications (e.g. seismic design criteria) and storm water management infrastructure will be constructed to accommodate severe weather conditions.

Mitigation measures to minimize the potential for, and the potential severity of, the environmental effects of the environment on the project are included in section 20.3 of the *SFPR Project Assessment Report*. These measures include adherence to design standards and the preparation and implementation of an Emergency Management Plan. With the implementation of these mitigation measures, the responsible authorities have concluded that the potential effects of the environment on the project are not likely to be significant.

8.0 CUMULATIVE ENVIRONMENTAL EFFECTS

The BC MOT revised and re-submitted the cumulative effects assessment for the SFPR in June 2008. As required by the CEAA, the cumulative effects assessment considered the potential residual environmental effects from the proposed SFPR project in combination with other past and foreseeable future projects that have been or may be carried out.

Past and existing projects/activities considered in the cumulative effects assessment included: development in Burns Bog; dyking of Fraser foreshore; development of railway (BCSF, CN, Sky Train); municipal development (farming, ports, housing, industrial parks); and transportation infrastructure (highways, major and minor roads, bridges).

Future projects/activities considered in the cumulative effects assessment included: the Border Infrastructure Projects; the Pitt River Bridge Project; the North Fraser Perimeter Road; the Port Mann Hwy. 1 Project; the Golden Ears Bridge; the BC Transmission Corporation transmission line; Deltaport Third Berth; and, Terminal 2 (based on information available).

The assessment identified potential cumulative environmental effects on: wildlife and wildlife habitat (habitat loss, changes in wildlife patterns, mortality from collisions); bog hydrogeochemistry; air quality; and, noise levels. The predicted extent, magnitude, duration, reversibility, ecological context, and probability of occurrence of the cumulative on these environmental components are summarized in Table 8-1.

Table 8-1: Summary of Cumulative Effects Assessment

Based on Table 10.3-7 in the BC MOT's revised Cumulative Effects Assessment, June 2008

Potential Cumulative Effect	E	M	D	R	EC	P
Habitat Loss - Bog habitat	L	Low	Long	No	WD	Low
Habitat Loss - Cultivated fields	L	Low	Long	Yes	D	Low
Habitat Loss - Upland Forest	R	Low	Long	No	WD	Low
Habitat Loss - Riparian Forest	L	Low	Long	No	D	Low
Habitat Loss – Wetland	R	Low	Long	No	D	Low
Fragmentation - Riparian forest	R	Low	Long	No	D	Low
Fragmentation - Upland forest	R	Low	Long	No	D	Low
Wildlife patterns (indirect habitat impact)	L	Mod	Long	Yes	WD	Mod
Wildlife mortality (collisions)	L	Low	Long	Yes	D	Low
Aquatic Impacts - Fish habitat	R	Low	Med	No	WD	Low
Air quality - CAC emissions	L	Low	Long	Yes	WD	Low
Air Quality - GHG emissions	L	Low	Long	Yes	WD	Low
Air Quality - PM input to Burns Bog	L	Low	Long	Yes	UD	Low
Change in noise after mitigation	L	Low- Mod	Long	Yes	WD	Low

E=Extent M=Magnitude D=Duration R=Reversibility EC=Ecological Context P=Probability
L=Local R=Regional Med=Medium UD=Undeveloped D=Developed WD=Well-developed

Mitigation measures to minimize the potential for cumulative environmental effects are integrated into Table 7-1 and are further summarized in section 22.3 of the *SFPR Project Assessment Report*. Based on the information contained in the Cumulative Effects Assessment (June 2008) and taking into consideration the mitigation measures identified, the responsible authorities have concluded that the project is not likely to cause significant cumulative adverse environmental effects.

9.0 PUBLIC PARTICIPATION

The responsible authorities did not make an 18(3) decision to consult, on the basis that opportunities for public input were provided as a component of coordinated BC-Canada EA process.

9.1 Consultation Opportunities Offered by the Provincial EA Process

Following the BC MOT's submission of its EA Application, the BC Environmental Assessment Office (EAO) coordinated the following opportunities for public input to the EA process:

- October 19 to December 17, 2006, the public was invited to comment on the SFPR Environmental Assessment Certificate Application. This included five open houses and Q&A sessions.
- April 20 to May 19, 2007, the public was invited to comment on SFPR Discussion Papers on specific issues raised during the EA process. These papers were focused on Burns Bog, Agriculture, Noise, Air Quality and Socio-Community.
- July 10 to July 31, 2007, the public was invited to comment on a revised version of the Cumulative Effects Assessment and refinements to the Air Quality Assessments

A summary of the public consultation process and the comments received by the BC EAO from the public is provided in section 6 of the *SFPR Project Assessment Report*.

During the coordinated EA process, the BC EAO also established and chaired a biophysical and socio-economic working group comprised of federal, provincial, municipal, and local First Nations representatives. The BC EAO chaired several meetings of the working group in 2007-2008 to review the EA information submitted by the BC MOT and provided the working group with two opportunities to review the *SFPR Project Assessment Report*.

9.2 Public Registries

A Notice of Commencement was posted on the Canadian Environmental Assessment Registry (CEAR) shortly after the federal EA process formally commenced in December 2006. The CEAR Reference number for the proposed SFPR project is 06-01-24060.

The project was also posted on the BC EAO's Internet-based Project Information Centre (e-PIC). In accordance with the requirements of its legislation, the BC EAO has posted EA documents on this site throughout the EA process to facilitate public access.

9.3 Community and Aboriginal Knowledge

Section 12 of the Project Application and Technical Volume 17 discuss community and Aboriginal knowledge in relation to the proposed SFPR project. Prior to the commencement of the federal EA process, the province had identified that the study area was within the asserted traditional territories of the Tsawwassen, Musqueam, Katzie, Kwantlen, Kwikwetlem, Qayqayt, and Semiahmoo First Nations. As a component of the coordinated EA process, these First Nations were invited to participate in the biophysical and socio-economic EA working group.

A summary of the involvement of the participating First Nations in the coordinated EA process is provided in section 7.4 of the *SFPR Project Assessment Report*. The Assessment Report concludes that minor and temporary potential impacts from the Project on the asserted or assumed Aboriginal rights of First Nations will be appropriately mitigated through commitments agreed to by MoT in the *Owner's Table of Commitments and Assurances*, so that these impacts will not significantly impact First Nations' current uses of land or resources for traditional purposes.

TC and DFO as the responsible authorities for the federal EA process, also sent letters to the participating First Nations on December 15, 2007 and April 20, 2007. No responses were received.

10.0 MONITORING AND FOLLOW-UP

10.1 Roles and Responsibilities for Monitoring and Follow-up

TC and DFO⁵ have overall responsibility to ensure that the mitigation measures they have taken into account in the determination of the significance of effects are implemented for their respective projects as scoped. The BC MOT is responsible for the implementation of mitigation measures, monitoring programs, and the conduct of required monitoring and follow-up, as required by the EA documentation and:

- Where federal regulatory processes exist for a specific environmental component, the mitigation measures and monitoring requirements will be specified in the terms and conditions of the federal regulatory instruments (i.e. *Fisheries Act* authorizations and *Navigable Waters Protection Act* permits).
- The federal funding contribution agreement between TC and the proponent will complement the federal regulatory instruments to ensure the implementation of mitigation measures, monitoring, the conduct of the follow-up program and any necessary adaptive management measures identified during follow-up activities.

TC will be responsible for the follow-up program and for arranging for the review of the results submitted by the proponent on the follow-up program. As reports are submitted, TC will determine if:

- the follow-up program as implemented is meeting the stated objectives;
- the effects are occurring as predicted in the EA report;
- the follow-up program requires amendment to adapt to changes in the project or differences in the observed environmental effects; and,
- the proponent is required to implement additional adaptive management measures to achieve acceptable environmental effects

In conducting this review, TC may request expertise from expert federal authorities. Both EC and HC have agreed to participate in the review of monitoring and follow-up reports, related to their mandates, as requested.

10.2 Monitoring

Mitigation monitoring programs that have been identified for the project include the following:

⁵ As effects, mitigation and monitoring activities relate to the RAs' scope of project for the EA

- environmental monitoring programs to ensure the effective implementation of typical project related mitigation and best management practices (i.e., water quality, air quality, hazardous waste management, etc.); and
- monitoring programs, identified in the Mitigation Monitoring Plan (BC MOT, 2008), that assess the effectiveness of mitigation proposed to address potential effects on specific vegetation and wildlife values including: red and blue-listed plants and plant communities; amphibians and reptiles; raptors (e.g., Barn Owl); water-associated birds (e.g., Sandhill crane); breeding birds; and small mammals (e.g., Pacific water shrew).

Work plans and/or draft documents for these monitoring programs were prepared during the EA process, however, specific details of the monitoring programs will be defined during the pre-construction period of project design. BC MOT will consult with EC and the BC Ministry of Environment in the preparation of the monitoring programs.

Monitoring program details relevant to the federal EA scope will be submitted to TC for review and approval before project construction activities that could adversely affect monitoring results commence. Monitoring programs to be managed by the province, including the monitoring of red and blue-listed plants and plant communities, amphibians and reptiles, raptors, and small mammals, will be submitted to TC once approved by the appropriate provincial jurisdictions.

The BC MOT will also be required to submit a report recording the status of the implementation of the mitigation measures outlined in Table 7-1 on monthly basis. This can be done using the TC template, or in another format acceptable to TC.

10.3 Follow-up

The CEAA defines follow-up as, “a program for verifying the accuracy of the EA of a project, and determining the effectiveness of any measures taken to mitigate the adverse environmental effects of the project.”

In addition to the monitoring programs identified during the EA process, TC requires the proponent to implement follow-up measures focused on the aspects of the EA related to Burns Bog, specifically:

- aerial deposition of particulate matter from road construction and operation;
- hydrological effects; and
- effects on sandhill crane.

The follow-up program for these aspects of the EA has been established by TC to:

- verify the prediction of environmental effects identified;
- determine the effectiveness of mitigation measures in order to modify or implement new measures where required;
- support the implementation of adaptive management measures to address previously unanticipated adverse environmental effects; and,
- provide information on environmental effects and mitigation that can be used to improve and/or support future EAs, including cumulative effects assessments.

In addition, DFO will require the proponent to implement the following follow-up monitoring:

- environmental monitoring of construction activities to ensure that mitigation measures to protect fish and fish habitat are properly incorporated into project construction activities; and

- effectiveness monitoring of fish habitat replacement (compensation) works to determine if these are functioning as intended. If the fish habitat replacement works are found to not be functioning then these will either be repaired/modified or other habitat replacement works will be implemented in order to ensure that no net loss of fish habitat is achieved.

10.4 Duration of the Follow-up Program

The proponent, the BC MOT, is responsible for implementing the follow-up program requirements and reporting the results to TC during construction and for a period of five years after the project has commenced operation. TC will determine at that time, whether the duration of the formal follow-up program needs to be extended.

The BC MOT will work with Metro Vancouver and the Corporation of Delta to develop and implement an agreement that would provide for the ongoing management of hydrology mitigation, following the conclusion of the formal follow-up program. It is anticipated that this on-going maintenance would become a component of the overall management of Burns Bog Ecological Conservancy Area (BBECA) and implementation of the long-term management plan for the area.

10.5 Follow-up Measures for Aerial Deposition

During the EA process, concerns were raised about the potential deposition of airborne particulates into Burns Bog, which could cause changes in the bog's hydrogeochemistry. To better understand the likelihood and potential magnitude of this effect, the BC MOT completed additional studies related to the rates of anticipated particulate deposition and the potential for resulting changes in bog hydrogeochemistry. Based on the results of these studies, additional mitigation was identified to ensure the project is not likely to cause a significant adverse environmental effect on Burns Bog as a result of particulate deposition.

The objectives of the follow-up program for aerial deposition are as follows:

- To monitor the accuracy of predicted rates of particulate deposition to Burns Bog, identified during the assessment.
- To monitor the effectiveness of the proposed mitigation in minimizing the deposition of airborne particulates into Burns Bog.
- To obtain data that can be used, if required, to support the design of adaptive management measures to address any unanticipated effects of aerial deposition.

The description of the follow-up measures described in this section are provided at a general level of detail. Specific details related to monitoring and follow-up activities will be documented in the final Burns Bog Air Quality Management Plan (AQMP). This document will be finalized, following review by appropriate reviewing agencies, before the commencement of pre-loading activities around Burns Bog (i.e. areas north of the Highway 99 interchange and west of Nordel Way).

10.5.1 Methods for Measuring Effects

The proponent will collect aerial deposition information, to meet the above noted objectives, by implementing the methods to be described in the final AQMP for the Burns Bog segment of SFPR. The general methods described in this document include:

- The establishment of baseline (pre-construction) dust fall rates and will be undertaken as follows:
 - Deployment of a continuous particulate monitor with meteorological station at 25 metres from the edge of road;

- Deployment of dustfall canisters at varying distances from the alignment (i.e., 25, 50, 100, and 200 metres);
- The location of the line of dustfall canisters will be located perpendicular to the potential road alignment between transects 2 and 3 as defined in *Modelling of Particulate Matter Deposition in Burns Bog from SFPR Emissions* (Levelton, 2008);
- Final locations will be determined after a field survey based on accessibility to proposed sites and proximity to areas where traffic related PM emissions may be expected to occur;
- One continuous PM monitor will be located at the first dustfall canister, about 25 m from the SFPR alignment.
- Another continuous PM monitor will be located near the centre of the bog and will act as the control site; and
- The monitoring system will be installed before pre-load work.

Initial baseline data collection will commence in July 2008 and continue until October 2008. This will provide a minimum of four months of data from the driest (dustiest) season and will provide a good understanding of worst-case fugitive dust deposition and ambient concentrations⁶. BC MOT will then augment the four months of baseline dustfall data with regional Metro Vancouver dust fall data for the remaining months of the year, to propose an annual dustfall baseline. The baseline data and proposed (augmented) annual baseline will be submitted to TC for discussion, before pre-loading activities around Burns Bog (i.e. areas north of the Highway 99 interchange and west of Nordel Way) commence.

It is anticipated that dust fall and particulate matter concentration data will continue to be collected to provide a full year of data around Burns Bog. At a minimum, a target of no less than 75% data collection has been established for continuous monitoring. Once complete, the full year of monitoring data to be collected by the project team will be reviewed, compared with the augmented annual baseline data, and any necessary adjustments will be made to air quality monitoring program in consultation with TC.

The transect that will be used for collecting baseline data and for monitoring and follow-up will be perpendicular to the north edge of Burns Bog and run into the Bog. This is the area where the highest estimated particulate deposition would be expected and is closest to Type 1 water.

For the duration of the follow-up program, dust fall and ambient particulate matter monitoring results will be compared to the established pre-construction baseline.

In order to complement particulate deposition monitoring data and to determine the impact of project-related changes in deposition on the Bog, monitoring of bog vegetation (i.e., *Sphagnum*) will also be undertaken. TC and EC (as well as other key stakeholders) will be consulted with respect to the planning of the monitoring program, including but not limited to, the location of environmental monitoring locations to ensure that linkages between trends in data describing different biophysical values may be drawn.

Details regarding bog vegetation (*Sphagnum*) monitoring will be advanced concurrently with the design of the hydrology mitigation and the environmental monitoring plan for SFPR in areas adjacent to Burns Bog. Final details related to the bog vegetation monitoring program will be provided to TC for review and approval, prior to project construction.

10.5.2 Reporting

During any month that an exceedance is measured, TC will be notified within a timely manner and the monthly mitigation monitoring report to TC will indicate what further management measures were taken and when they began. Otherwise, information collected for each canister and sampler and the

⁶ The BC MOT will meet with TC (and other reviewing agencies as appropriate) following the collection of the first 4 months of baseline data and before the commencement of pre-loading activities.

interpretation and conclusion of potential trends will be reported to TC within two months of data collection.

On an annual basis, a summary of the results of air quality monitoring around Burns Bog will be provided to government agencies with an interest in potential effects of air quality on Burns Bog.

These bi-monthly and annual reports will be provided through written reports that will be submitted to TC. In addition, for the first year of project construction, BC MOT will meet every 6 months with TC and other federal departments as determined to be necessary to discuss the results of the monitoring program and the effectiveness of mitigation in addressing potential effects. The need for the continuation of regular meetings will be determined at that time.

10.5.3 Adaptive Management Measures

Adaptive management measures related to potential aerial deposition effects on Burns Bog, were identified in the draft AQMP prepared for the Burns Bog segment of SFPR. This document will be finalized as project design progresses, and submitted for TC review and approval.

The AQMP for Burns Bog identifies best management practices that will be implemented in order to avoid or minimize particulate deposition from construction and operation of the project. These will include dust control measures such as regular watering, use of vegetation, use of wind fences, and curtailment or stoppage of activities that are disturbing the surface. Vehicle speeds will also be limited to 15 km/hr on unpaved work areas, where feasible. During operation, mitigation that will be implemented will include planting of additional roadside vegetation to intercept dust, cleaning the road surface or increasing the intensity of road cleaning; and minimizing the application of salt or abrasives during winter.

Where it is determined that rates of particulate deposition have exceeded an established threshold, additional mitigation measures will be implemented. The BC MOT has proposed that the BC dust fall objective of 1.75 mg/dm²/day (5.3 g/m²/month) be used as the threshold that, if exceeded by any of the monitors, will trigger the requirement for additional mitigation to address construction related emission of dust. TC will meet with the BC MOT following the collection of baseline monitoring information, and before pre-loading activities, to confirm the proposed threshold value.

These measures will be implemented during times and in locations where it is deemed necessary due to the exceedance of identified thresholds for particulate matter deposition.

10.6 Follow-up Measures for Hydrology

The description of the follow-up measures described here provide a general description of the methods to be used for measuring changes in hydrology and for determining the need for adaptive management measures. Specific details will be developed and described in a hydrological monitoring plan for Burns Bog that will be prepared in parallel to site specific hydrology mitigation infrastructure. The details regarding the design and construction of proposed hydrology mitigation, as well as associated hydrology monitoring programs will be documented in a final Hydrology Work Plan to be approved by TC. This document will be finalized prior to commencement of pre-load activities around Burns Bog (i.e. areas north of the Highway 99 interchange and west of Nordel Way) and will take into consideration comments received from federal reviewers.

The objectives of the follow-up program for hydrology are as follows:

- To monitor the effectiveness of the mitigation proposed to avoid impacts⁷ to the hydrology of the bog adjacent to SFPR.
- To obtain data that can be used, if required, to support the development of additional mitigation or refinement of existing mitigation, to protect hydrological values (i.e., water levels and water chemistry).

10.6.1 Methods for Measuring Effects

A monitoring program⁸ to assess the effectiveness of hydrological mitigation measures in managing water levels at the interface of Burns Bog and SFPR, will be developed in concert with the development of detailed design for hydrology mitigation and associated construction plans. As the hydrology monitoring program is further defined, the details of the program will be documented in a final Hydrology Work Plan that will be provided to TC for review and approval prior to the commencement of pre-loading activities around Burns Bog.

The frequency of data collection to be used for the purposes of the monitoring and follow-up program will continue as follows: water level data will be collected continuously using transducers; and, water quality data will be collected twice a year (i.e., a wet and dry period).

The current and planned monitoring occurs in January (wet season) and September (dry season). The schedule for monitoring water levels in the Bog has been established based on field observations that indicate that the Bog saturates quickly with the on set of the rains in November and appear to be fairly consistent from November to March. January is considered an appropriate month for sampling since it follows the wettest months of the winter in the Vancouver area (November and December) and in dry years water levels may begin to decline in March.

The method for monitoring the effectiveness of hydrological mitigation measures in avoiding changes to hydrochemical conditions in Burns Bog will include continued monitoring of groundwater monitoring wells in and around Burns Bog and comparison of results to pre-construction baseline conditions. Monitoring of hydrochemical conditions will focus on the constituents that were considered during pre-construction baseline monitoring including pH as well as other measures of water chemistry (e.g., calcium, metals, road related organics etc.) as described in Table 10-1.

Table 10-1 Groundwater Quality Parameters for Monitoring Hydrological Mitigation

Location	Sampling Rationale	Analytes
Within Burns Bog	Assessing bog health	Field parameters (including pH, specific conductivity, redox and dissolved oxygen) and dissolved calcium
Along the alignment	Monitoring for potential changes to water quality	Field parameters (including pH, specific conductivity, redox and dissolved oxygen), dissolved metals, anions, Gran alkalinity, ammonia, total dissolved solids, total suspended sediment, tannin and lignin, total organic carbon, BETX, and light and heavy extractable petroleum hydrocarbons (includes a silica gel clean up to remove naturally occurring organics)

⁷ Impacts to avoid include: not precluding increased water levels associated with bog restoration works being undertaken by the agencies responsible for managing the Burns Bog Ecological Conservancy Area as well as preventing adverse changes in water chemistry adjacent to Burns Bog.

⁸ In the event that other hydrology mitigation concepts are identified during design discussions, BC MOT will consult with TC to determine the potential implications for follow up and monitoring activities.

In further developing the scope of the hydrology monitoring program, BC MOT will seek advice from EC on the suite of water chemistry parameters associated with granitic dust that will be monitored, methodologies for data collection, and specialist advice that may be required to guide the development and implementation of the monitoring program. BC MOT will also seek advice from EC regarding the criteria to be used in evaluating and interpreting the results.

In addition to contributing to an assessment of the hydrological mitigation, the monitoring of hydrochemical conditions adjacent to hydrology mitigation will provide a mechanism for determining the extent to which oxidized catotelmic peat (used to build berms) may be impacting water quality.

As previously noted, the monitoring and follow-up program for hydrology will be further defined during the early stages of the detail design phase (prior to pre-loading activities around Burns Bog). As the monitoring program is further developed, it will:

- identify the number of observation locations (and their construction methods) to be monitored and the frequency and duration of sampling to be conducted;
- include the collection of the same information with respect to water quality and water level data collected to support the environmental impact assessment and will take into consideration input provided by EC; and,
- identify metrics to be measured, methods for data collection and performance thresholds.

Based on advice received from EC during the EA process, the following recommendations will also be further considered during the design of the monitoring program:

- New acrotelm depth samplers (piezometers) could be installed to allow for sampling of the acrotelm water.
- Timing of sampling should capture seasonal changes, conditioned by changes in the water table. Sampling may need to be more frequent at times of rapid change in water level and also in critical periods when water levels are low.
- The following sensitive parameters should be included in the water chemistry: pH, conductivity, gran alkalinity, major ions, DOC, and any species that are associated with "granitic dust".
- Sampling sites should be established along a transect perpendicular to the road, co-located with the *Sphagnum* monitoring sites.
- Vegetation monitoring, at sites along the same transect perpendicular to the road, could involve establishing permanent sampling plots (quadrants) both inside and outside the area of predicted maximum atmospheric deposition. The sampling methodology and frequency should be based on the existing vegetation monitoring program being done for the SAP.
- Vegetation monitoring sites should also be collocated with sites used for air quality monitoring (e.g. atmospheric samplers for wet/dry deposition, meteorological parameters, particulate samplers) to allow for correlation with the air quality follow-up monitoring results.

10.6.2 Reporting

The reporting protocol, including the reporting intervals, will be identified during the development of the Work Plan for advancing hydrology mitigation as noted above. It is anticipated that reporting will occur a minimum of every 6 months during pre-loading work and during the first year of construction. The frequency of reporting will be revisited at that time, in consultation with TC.

In addition, for the first year of project construction, BC MOT will meet every 6 months with TC, and other federal departments as determined to be necessary, to discuss the results of the monitoring program

and the effectiveness of mitigation in addressing potential effects. The need for the continuation of regular meetings will be determined at that time.

10.6.3 Adaptive Management Measures

Adaptive management measures, to be implemented in the event that hydrological mitigation causes unintended adverse effects, could include:

- Adding additional hydrology mitigation infrastructure to include additional areas adjacent to the alignment;
- Modifying the structure and/or function of mitigation infrastructure (e.g., raising the level of berms, changing infrastructure regulating water flows etc.);
- Changing the size of the structures;
- Changing the management or maintenance processes associated with operation of the hydrology mitigation; and
- Maintenance measures to address oxidized catotelmic peat used to construct hydrology mitigation including, but not limited to, replacement of catotelmic peat used in such structures.

As the intent of the hydrology mitigation is to avoid impacts to existing conditions in Burns Bog and not preclude future opportunities for restoration, the effectiveness of the hydrological mitigation will be defined by the extent to which it facilitates progress towards broad management objectives, identified in the long-term management plan for the Burns Bog Ecological Conservation Area. The metrics for assessing progress towards conservation and restoration objectives will be ecological information collected as part of the environmental monitoring program that is undertaken in concert with the construction and operation of hydrology mitigation including: water levels; water chemistry, and bog vegetation.

10.7 Follow-up Measures for Sandhill Crane

The description of follow-up measures described here is provided at a general level of detail regarding the methods of measuring effects and the potential need for adaptive management. Specific details are included in the Sandhill Crane Mitigation Monitoring Workplan, as referenced.

The objectives of the follow-up program for Sandhill Crane are as follows:

- To assess the effectiveness of mitigation proposed to avoid indirect (i.e., visual and noise related disturbance) effects on Sandhill Cranes foraging in habitat adjacent to Crescent Slough.
- To collect data to guide the development and implementation of additional mitigation if required.
- To assess the importance of foraging habitat adjacent to the alignment and in the Crescent Slough area to regional (Lower mainland) and migratory populations of Sandhill Crane.

10.7.1 Methods for Measuring Effects

The methods for measuring the effectiveness of mitigation of effects on Sandhill Crane are described in the Sandhill Crane mitigation monitoring workplan that is part of the overall Mitigation Monitoring Plan for the project. General methods for monitoring the effectiveness of mitigation include:

- Observations of presence, abundance, and location during spring and fall staging and migratory periods;
- Observations of regional and local movements of Sandhill Crane;
- Observations, via satellite telemetry, of movements of Sandhill Crane during spring and fall; and
- Distribution and description of the attributes of preferred Sandhill Crane foraging habitat.

10.7.2 Reporting

As described in the Sandhill Crane mitigation monitoring workplan, an annual report on monitoring results will be prepared and provided to TC and the Canadian Wildlife Service at EC. A subsequent annual meeting will also be arranged to review report results and discuss potential changes that may be required to future monitoring plans and mitigation efforts. As per other aspects of the monitoring and follow up program, monitoring and follow up activities focusing on Sandhill Crane, in the project corridor, will continue for 5 years after the operation of the road has commenced.

10.7.3 Adaptive Management Measures

Adaptive management measures, to be implemented in the event that potential effects to Sandhill Crane are not addressed through the application of proposed mitigation (i.e., vegetated buffer to avoid visual effects), could include the following. Such measures would be implemented if, through consultation with TC and the Canadian Wildlife Service, it was determined that use of fields adjacent to Crescent Slough experienced reductions in use of fall foraging habitat by local Sandhill Crane populations as a result of the project.

- Changes in the type of noise walls (e.g. solid noise barrier) used along this portion of the alignment to further reduce visual effects and associated road noise; and
- Working with landowners to encourage stewardship/management of agricultural fields adjacent to the alignment and/or in other potentially suitable areas in order to encourage habitat conditions associated with preferred habitat (i.e., crop type, timing of harvest, leaving some crop fields for foraging etc.).

10.8 Follow-up Measures for Cumulative Effects

The EA identified a potential for residual effects on the components included in this follow-up program. While none of the residual effects identified were determined to likely be significant in combination with the effects of past, present or future project and activities, the monitoring and follow-up measures identified in sections 10.5 to 10.7 have taken the potential for cumulative effects into consideration. Additional monitoring and/or follow-up measures may be developed, as required, once the follow-up program has been implemented.

10.9 Conclusions

Based on the commitments included in this follow-up program, and taking into consideration the measures described in the *Owner's Table of Commitments and Assurances*, the federal responsible authorities⁹ are satisfied that the mitigation monitoring measures and follow-up programs developed will be sufficient to verify the EA predictions, determine the effectiveness of mitigation measures, support the implementation of adaptive management measures, and provide information on environmental effects and mitigation that can be used to improve and support future EA processes.

11.0 COMMITMENTS FOR FURTHER WORK

Throughout the *SFPR Project Assessment Report* and *Federal Screening Report*, references are made to a number of plans and programs that will be further developed during the design phase of the project. These commitments are specifically outlined in the Owners Table of Commitments and Assurances, which becomes legally binding if the proposed project receives an EA certificate from the BC EAO.

⁹ As effects, mitigation and monitoring activities relate to the RAs' scope of project for the EA

The following commitments for further work are specifically mentioned in this document. TC will review these documents to ensure the federal EA commitments are met, prior to their finalization.

- Air Quality and Dust Control Plan
- Air Quality Management Plan for Burns Bog
- Contaminated Sites Management Plan
- Emergency Management Plan
- Environmental Management Plan
- Fish Habitat Mitigation and Compensation Plan (* to be submitted to DFO for review and approval)
- Habitat Compensation Plan
- Hazardous Waste Management and Spills Plan
- Hydrological Monitoring Plan
- Hydrology Work Plan for Burns Bog
- Invasive Species Management Plan
- Noise and Vibration Management Plan
- Stormwater Quality and Sediment Erosion Control Plan
- Vegetation and Wildlife Habitat Management Plan
- Water Quality Monitoring Program

A minimum of 4 to 6 weeks should be provided to facilitate federal review of these documents. To ensure adequate time is provided for review and approval, it is recommended that the proponent provide TC with a workplan outlining when each of these documents will be prepared and circulated for review. While EC and HC will be members of the BC MOT's Inter-agency Environmental Review Committee, which will be provided with opportunities to review post-EA documentation, they have also agreed to provide advice related to their mandates to TC, if requested.

As detailed in Table 7-1, prior to commencing pre-loading or construction activities around Burns Bog (i.e. west of Nordel Way and north of Highway 99) the BC MOT will:


- Consult with Metro Vancouver, Corporation of Delta, Ministry of Environment, Environment Canada, and the Burns Bog Management Planning Committee (BBMPC) to ensure the design, construction and operation of the Project complements the long-term management objectives established for the Burns Bog Ecological Conservation Area.
- Submit a revised Hydrology Work Plan, describing site-specific hydrology mitigation and monitoring plans, to TC for review and approval;
- Advance designs for hydrology mitigation that meet the hydrology objectives.
- Submit a revised Burns Bog Air Quality Management Plan that identifies the site-specific mitigation measures to prevent generation and transmission of dust into Burns Bog to TC for review and approval.
- Collect a minimum of 4 months of baseline dust fall monitoring commencing July 1, 2008, following which BC MOT will meet with TC to discuss the baseline monitoring information collected, thresholds for the air quality monitoring program, and the approach for continued data collection.

Approvals will be required prior to construction for the bridge crossings at McAdam Creek, Collings Creek, Manson Canal and Crescent Slough, as these are 'named' works within the meaning of the *Navigable Waters Protection Act*. The proponent will also be required to obtain authorization under subsection 35(2) of the *Fisheries Act* for any unavoidable harmful alteration, disruption or destruction of fish habitat prior to relevant construction works or activities.

12.0 CEEA CONCLUSIONS

Taking into consideration the application of the mitigation measures identified in the EA documentation and in accordance with subsection 20.(1) of the *Canadian Environmental Assessment Act*, TC and DFO have determined that the project, as scoped by the responsible authorities in sections 5.1 and 5.2 of this document, is not likely to cause significant adverse environmental effects.

CEEA Screening Report prepared by:

 Date: 2008-07-25

Title: **Cathy Hainsworth**
EA Project Manager, Surface Programs
Transport Canada

The above has prepared this environmental screening report to the best of her/his ability or knowledge.


13.0 TRANSPORT CANADA EA DECISION

The scope of the project for Transport Canada included all aspects of the construction, operation, modification, and decommissioning work in relation to the project, including the highway, between Deltaport Way and the Fraser River Crossing at about 184th Street, and all associated structures and infrastructure essential to construct and operate the highway. This included fabrication of associated structures, such as bridges, pilings, structural fills, works in a water body, material handling and laydown areas, fuel storage facilities, sewage disposal, construction platforms, storage sites and all equipment and machinery.

Based on this project scope and in accordance with subsection 20(1) of the CEAA, Transport Canada has determined that the project is not likely to cause significant adverse environmental effects with the application of the mitigation measures specified in the EA documentation and all relevant construction specifications and Best Management Practices.

As noted throughout the document, the proponent (or its representatives) is responsible for the implementation of the mitigation measures, monitoring programs, and follow-up measures identified in the EA documentation for the SFPR project.

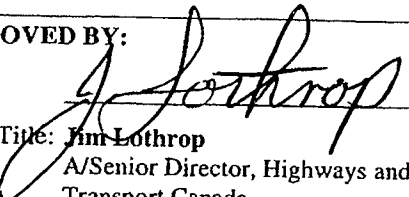
MITIGATION MEASURES ACCEPTED BY:

 Date: July 29/08

Title: **Frank Blasetti**
Assistant Deputy Minister, Partnerships Department
B.C. Ministry of Transportation and Infrastructure

The proponent has read and understood this environmental screening report and accepts responsibility for the implementation of the mitigation measures and related monitoring and follow-up programs identified.

ENVIRONMENTAL SCREENING APPROVED BY:

 Date: 2008-07-28

Title: **Jim Lothrop**
A/Senior Director, Highways and Borders
Transport Canada

The above has reviewed the environmental screening report and approves the CEAA Decision.

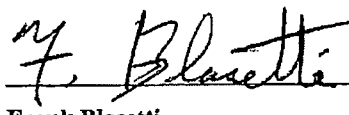
14.0 FISHERIES AND OCEANS CANADA EA DECISION

DFO's scope of project is the components of the proposed project, or activities required for the proposed project, that have the potential to result in unavoidable harmful alteration, disruption or destruction of fish habitat associated with watercourse crossings that require authorization under subsection 35(2) of the *Fisheries Act*; and any ancillary works and/or activities that are required solely for the purpose of undertaking the components of the proposed project that require authorization under subsection 35(2) of the *Fisheries Act*.

Based on this project scope and in accordance with subsection 20(1) of the CEAA, DFO has determined that the project is not likely to cause significant adverse environmental effects with the application of the mitigation measures specified in the EA documentation.

As noted throughout the document, the proponent (or its representatives) is responsible for the implementation of the mitigation measures and monitoring programs measures identified in the EA documentation for the SFPR project.

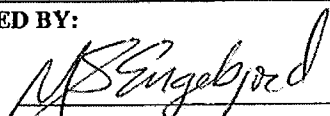
MITIGATION MEASURES ACCEPTED BY:

 Date: July 28/08

Title: **Frank Blasetti**
Assistant Deputy Minister, Partnerships Department
B.C. Ministry of Transportation and Infrastructure

The proponent has read and understood this environmental screening report and accepts responsibility for the implementation of the mitigation measures and related monitoring and follow-up programs identified.

ENVIRONMENTAL SCREENING APPROVED BY:

 Date: July 28, 2008

for Title: **Adam Silverstein**
Manager, Environmental Assessment and Major Projects
Fisheries and Oceans Canada

The above has reviewed the environmental screening report and approves the CEAA Decision. In addition, the above Federal Department/Agency provides Transport Canada with assurance that mitigation measures identified under their responsibility will be implemented.

APPENDIX B
TABLE OF COMMITMENTS

1. Note that this Appendix B varies from the Environmental Assessment Certificate “Proponents Table of Commitments and Assurances” in that two columns “Delivered by” and “Performance Mechanism Index” have been added to this Appendix B. All other columns in this Appendix B are intended to contain the precise language as found in the Environmental Assessment Certificate “Proponents Table of Commitments and Assurances”.
2. Notwithstanding any references in a condition to “Proponent”, “Holder” and/or “Design-Builder”, a commitment in this Appendix B that:
 - (a) contains a corresponding designation of “Design-Builder” in the column entitled “Delivered by”; or
 - (b) contains a corresponding designation of “Design-Builder/Province” in the column entitled “Delivered by”,shall be interpreted to mean that the Design-Builder shall be obliged to perform and carry out the works and activities and comply with the matters described in the relevant condition in their entirety or, as the case may be, as provided otherwise in the Notes included in the “Delivered by” column.
3. The designation of “Minor”, “Moderate”, “Major”, or “Severe” in the column entitled “Performance Mechanism Index” in this Appendix B indicates, in respect of the condition corresponding to such designation in this Appendix B, the basis on which NCE Points and Default Points will be assigned in accordance with Part 5 [NCE Points and Default Points] of Schedule 10 to this Agreement.
4. All terms used in the “Condition” column of this Appendix B and included in the table “Definitions” forming part thereof shall have the meanings given in such table. All defined terms used in the “Delivered by” column of the Table of Commitments shall have the meanings given in Schedule 1 [Definitions and Interpretation] to the Design-Build Agreement.

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 6: ENVIRONMENTAL OBLIGATIONS
Appendix B: Table of Commitments

Commercial in Confidence
Execution

Ref	Objective Commitments and Assurances	Delivered By ¹	Performance Mechanism Index
1.0 Responsible Environmental Management			
1.1	Develop, implement and maintain an Environmental Management Plan (EMP) for the Project to demonstrate how the design, construction and operation, including maintenance, of the Project: <ul style="list-style-type: none"> ○ Will be carried out to avoid or mitigate negative impacts; ○ Will be carried out in an environmentally responsible manner, in accordance with DBSS 165 [Protection of the Environment]²; ○ Will employ Best Management Practices (BMPs³); and ○ Will comply with federal and provincial legislation, permits, approvals and authorizations, including the Environmental Assessment Certificate (EAC). 	Design-Builder	Severe
1.2	Prepare and implement a Construction Environmental Management Plan (CEMP), (which is a component of the EMP) ⁴ , including relevant sub-plans, for the Project prior to the start of relevant construction activities.	Design-Builder	Severe
1.3	Obtain required statutory permits, approvals, and authorizations before proceeding with construction that requires such permits.	Design-Builder	Severe
1.4	Adhere to the terms and conditions of the: EAC; federal screening report; the EMP; DBSS 165 [Protection of the Environment]; and any other applicable permits, licenses and approvals.	Design-Builder	Severe
1.5	Establish an Inter-Agency Environmental Review Committee (IAERC), in accordance with the Terms of Reference developed during Application review, to provide for agency review and comment on plans and designs prior to construction, including but not limited to: <ul style="list-style-type: none"> ○ Detailed design of stormwater management infrastructure; ○ Detailed vegetation and wildlife mitigation plans and mitigation monitoring plans; and ○ Environmental management plans. 	Province (Province establishment of IAERC and for review of work carried out by Province only)/ Design-Builder	Moderate

¹ Summary provided for guidance only; specific applicable provisions of the Agreement shall govern.

² Should there be a conflict between the DBSS165 and these commitments, the more stringent environmental protection measure will apply.

³ Those that are technically and economically feasible and as defined specifically in other sections of this Table of Commitments.

⁴ As discussed in section 11 of the EA Application.

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 6: ENVIRONMENTAL OBLIGATIONS
Appendix B: Table of Commitments

Commercial in Confidence
Execution

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
1.6	Provide all project related EMPs, including component EMPs, to applicable regulatory agencies in the IAERC for review and comment, at least 30 calendar days prior to the start of construction that requires such plans.	Design-Builder	Severe
1.7	Relevant sub-plans to be included in the CEMP will include those to address environmental issues identified in the Application and supporting documentation submitted to the EAO during the Application review, and described in the Application (Section 11, pg. 523), including but not limited to: <ul style="list-style-type: none"> ○ Agriculture Mitigation Plan; ○ Air Quality and Dust Control Plan; ○ Archaeological Mitigation / Monitoring Plan; ○ Construction and Hazardous Waste Management Plan; ○ Contaminated Sites Management Plan; ○ Contractor Awareness and Education Plan; ○ Environmental Monitoring Plan; ○ Fisheries Habitat Mitigation and Compensation Plan; ○ Health and Safety Plan; ○ Invasive Species Management Plan; ○ Noise and Vibration Management Plan; ○ Spill Management and Emergency Response Plan; ○ Surface Water Quality and Sediment Control Plan; ○ Wildlife and Habitat Management Plan. 	Design-Builder	Major
1.8	Manage contamination encountered during project development, regardless of the current assessment of potential contamination, in accordance with applicable regulatory requirements.	Design-Builder	Major
1.9	Prepare and implement an Operational Environmental Management Plan, prior to operation and maintenance activities. Provide the operational EMP to relevant reviewing and regulatory agencies, for review and comment, at least 30 calendar days prior to the onset of operation and maintenance activities.	Design-Builder	Severe
1.10	At a minimum, review the Wildlife and Habitat Management Plan and modify if required, three years post- construction and make a decision regarding the next review date and/or determine the closure date for the plan(s). The method for review, modification, and decision on closure of the plan(s) will be defined by the applicable regulatory agencies within the IAERC.	Design-Builder	Moderate

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 6: ENVIRONMENTAL OBLIGATIONS
Appendix B: Table of Commitments

Commercial in Confidence
Execution

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Ref	Objective Commitments and Assurances	Delivered By ¹	Performance Mechanism Index
2.0 Monitoring			
2.1	Ensure that environmental monitoring and reporting for the Project will be conducted, with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations as applicable.	Province (Province for monitoring carried out by the Province only)/Design-Builder	Severe
2.2	Incorporate a monitoring component into all applicable sub-plans of the construction EMP developed for the construction phase of the Project.	Design-Builder	Moderate
2.3	Outline in each of the sub-plans of the construction EMP: <ul style="list-style-type: none"> o Rationale for monitoring; o Parameters to be monitored; o Monitoring program details; and o Required follow-up actions. 	Design-Builder	Moderate
2.4	The Owner will engage an Environmental Monitor for the construction phases of the Project to undertake environmental monitoring activities and oversee implementation of each of component plans of the EMP developed for the Project. The Environmental Monitor will monitor, evaluate, and report to the owner on construction activities and the effectiveness of the environmental management strategies and mitigation measures, with respect to the terms and conditions of the Application and other regulatory Permits, Approvals and Authorizations that may apply. The Monitor will be responsible for making onsite decisions and taking on-site action to avoid/respond to potential environmental effects which could include temporary stop work orders if necessary.	Design-Builder	Severe
2.5	Implement environmental quality management program through monitoring, auditing and reporting activities for the Project with respect to the terms and conditions of the EAC and other regulatory permits, approvals and authorizations.	Design-Builder	Severe
3.0 Incident Management			
3.1	Respond to environmental incidents, including spill incidents in accordance with the Emergency Response Plan to minimize effects and risks to the general public, on-site workers and the environment.	Design-Builder	Severe

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3.2	Include protocols, consistent with the BC Spill Reporting Regulation, for reporting spills to appropriate emergency response authorities, including; <ul style="list-style-type: none"> ○ The Provincial Emergency Program, in the case of any spills of reportable deleterious substances into waters frequented by fish, regardless of the amount of the spill; and ○ To adjacent property owners and occupiers, including local government, where utilities cross the highway and there is a potential for an incident to extend beyond the Project boundaries. 	Design-Builder	Major
3.3	Train all field Project personnel regarding implementation of the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans.	Design-Builder	Minor
3.4	Incorporate relevant municipal contacts into the emergency contacts for the Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans prepared for construction of the Project.	Design-Builder	Minor
3.5	Follow applicable DBSS 165 and Canadian Council of Ministers of Environment codes and procedures if temporary fuel storage/fuelling facilities are required during construction. Where there is a difference in standards, the most stringent measure for environmental protection will take precedence.	Design-Builder	Moderate
4.0	Community Consultation		
4.1	Consult with local governments, stakeholders and the public during all stages of Project development.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
4.2	Conduct community open houses and information sessions during the design review stage to obtain input on design refinements, during the preliminary and final design review stages.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Moderate
4.3	Provide regular public information updates on the progress of construction, the schedule, and upcoming milestones.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor

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4.4	Consult with the Corporation of Delta (CoD) and the City of Surrey (CoS) during all stages of project development and construction.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
4.5	Provide updated media information materials, as part of the Project commitment to making project information available to the public.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor
4.6	Track project enquiries and responses.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor
4.7	Discuss potential economic opportunities generated by the Project with participating First Nations throughout the Post-EA Certification, Design and Construction Phases of the Project.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
4.8	Obtain input from participating First Nations to identify appropriate measures to mitigate potential project related impacts on their previously identified interests in relation to fisheries and habitat matters.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
5.0	Stormwater Management		
5.1	Ensure that the design, construction and maintenance of stormwater management infrastructure for the Project takes an integrated approach to stormwater management and contributes to maintaining, or improving, drainage and water quality conditions directly adjacent to the corridor.	Design-Builder	Moderate
5.2	Design, construct and maintain stormwater management infrastructure, such that it to meets the performance objectives outlined in the Stormwater Management Plan Outline (July, 2007) and the Application. Monitoring of the infrastructure will be undertaken to confirm performance objectives are met or, if necessary, additional steps are taken to ensure performance objectives are achieved.	Design-Builder	Moderate

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5.3	Consult with municipalities adjacent to the new construction area such that the approach to the management of stormwater and drainage design is complementary to, and can be integrated with, adjacent municipal stormwater infrastructure.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Moderate
5.4	Provide final designs for stormwater management infrastructure to relevant First Nations and reviewing and regulatory agencies for review and comment at least 30 calendar days prior to relevant construction activities in order to verify that the proposed infrastructure achieves agreed upon performance measures identified in the Stormwater Management Plan Outline (July 2007).	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Severe
5.5	Drain stormwater and road runoff away from red and blue listed plant communities and do not construct integrated stormwater management infrastructure in such habitat areas.	Design-Builder	Moderate
5.6	Obtain input from participating First Nations regarding mitigation measures outlined in the stormwater and drainage plan and effective integration of those measures into the design and operation of the Project.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
6.0	Agriculture		
6.1	Consult with the Agricultural Land Commission (ALC), Ministry of Agriculture and Lands (MAL), Delta Farmers' Institute (DFI), individual farm owners and the CoD, through all future stages of Project development, construction and operation, to ensure impacts to agricultural lands and operations are minimized where possible and appropriately addressed where impacts are unavoidable.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Moderate
6.2	Obtain ALC approvals regarding areas within the Agricultural Land Reserve (ALR) required for the project, prior to construction.	Province	
6.3	Develop and implement an Agricultural Mitigation Plan as outlined in the Application that identifies potential impacts to agriculture as a result of project construction activities and measures for avoiding and addressing such impacts where possible. The scope will include those measures outlined in the Application and the Agricultural Enhancement Strategy (April 2008), including but not limited to mitigation measures focused on: <ul style="list-style-type: none"> o Road access; o Drainage and irrigation; o Utilities; and o Maintaining the agricultural land base. 	Province (Province for work carried out by Province only)/Design-Builder	Severe

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6.4	Finalize and implement specific agricultural enhancement initiatives, including but not limited to, compensation mechanisms focused on improving road access and drainage and irrigation, as part of the application process to the ALC and summarily as part of the Agricultural Enhancement Strategy (April 2008).	Province/Design-Builder (Design-Builder for scope of Project Work specified in this Agreement only)	
6.5	Retain the services of a Professional Agrologist to: <ul style="list-style-type: none"> o Liaise with the owner, Design-Builder and farmer(s); o Oversee a consultation and dispute resolution process for individual farmers affected by the Project; and o Oversee monitoring and effectiveness of measures proposed to address impacts to agriculture during design, construction and operation. 	Province	
6.6	Avoid, to the extent possible, using agricultural lands outside of the Right-Of-Way (ROW), for staging areas. For all agricultural lands that are required for use as staging areas, implement construction BMPs (as noted in the Agriculture Mitigation Plan in the EMP) to manage potential construction related effects and restore lands to pre-construction condition, or better agricultural capability, upon completion of project works.	Design-Builder	Moderate
6.7	Consult with individual farm owners, as well as MAL, ALC, CoD, DFI and other stakeholders, to identify potential impacts to agricultural operations and infrastructure and ensure that such impacts are avoided, mitigated for, or appropriately addressed during future stages of design and construction of the Project. The scope of potential impacts to farm operations includes, but is not limited to: <ul style="list-style-type: none"> o Agricultural drainage; o Utilities; o Road Access; and o Pollinators. 	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Moderate
6.8	Undertake reasonable measures to facilitate the consolidation of parcels of isolated agricultural lands, to promote continued agricultural use of such lands.	Province	
6.9	Undertake reasonable measure to minimize potential loss of ALR lands, including existing farm(s) by: <ul style="list-style-type: none"> o Refining the Project footprint where feasible; and o Optimizing use of existing ROW. 	Design-Builder	Moderate

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7.0 Air Quality			
7.1	Ensure that the construction works and operations for the Project are conducted in compliance with environmental permits and approvals and that all reasonable measures are taken to address project-related effects on air quality.	Design-Builder	Moderate
7.2	Develop and implement an Air Quality and Dust Control Plan for the construction phase of the project. The plan will: <ul style="list-style-type: none"> ○ Include an air quality monitoring program with thresholds, which if exceeded, will trigger the implementation of additional mitigation and corrective measures; ○ Commit to the best available, known and effective, measures for mitigating construction related air emissions, including diesel particulate matter (PM), as identified by relevant regulatory agencies. This would include, where practical, the use of diesel oxidation catalysts (DOCs) or diesel particulate filters (DPFs) on all on-road and off-road project equipment in combination with use of a B20 biodiesel blend; ○ Include an anti-idling policy for construction equipment and other vehicles associated with construction related activities ; ○ Commit to fugitive dust minimization strategies (e.g. wheel wash and sweeping), and dust suppression techniques (e.g. watering) on roads; and ○ Identify site specific considerations, where applicable, such as proximity to sensitive environmental or human receptors. 	Design-Builder	Severe
7.3	Provide the Air Quality and Dust Control Plan to Metro Vancouver, Environment Canada (EC), Ministry of Environment (MoE), Transport Canada, Health Canada (HC) and other relevant agencies for review and comment at least 30 calendar days prior to relevant construction activities.	Design-Builder	Moderate
7.4	Avoid burning as a means for disposing of land clearing debris.	Design-Builder	Major
8.0 Traffic Management			
8.1	Ensure that the design of the Project is integrated with local road networks, and that construction of the proposed project includes measures for avoiding or minimizing impacts to local road networks.	Design-Builder	Major
8.2	Prepare and implement a Traffic Management Plan in coordination with CoS and CoD to address construction related traffic conditions.	Design-Builder	Major

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8.3	Consult with the CoD, CoS, MoT district office, and other stakeholders to design and construct project infrastructure so that it is effectively integrated with existing and planned local road networks.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
9.0 Noise and Vibration			
9.1	Ensure that potential noise impacts associated with the project are considered and mitigation provided for during design, construction and operation of the project.	Design-Builder	Major
9.2	Prepare and implement a Noise and Vibration Management Plan for the construction phase of the Project that will include specific mitigation measures, and locations where they will be applied to address construction related noise.	Design-Builder	Severe
9.3	Prepare a noise complaint protocol as part of the CEMP Noise and Vibration Management Plan to respond in a timely manner to concerns and complaints raised by residents and take reasonable actions to reduce the Project-related construction noise in question.	Design-Builder	Minor
9.4	Provide the construction Noise and Vibration Management Plan to the CoS, CoD and other stakeholders for review and comment 30 calendar days prior to the onset of relevant construction activities.	Design-Builder	Moderate
9.5	Design and construct mitigation measures to address potential operational noise impacts on residential areas as part of the project according to the MoT Noise Policy (1993) [referenced as the Noise Policy in this Agreement].	Design-Builder	Moderate
9.6	Conduct noise monitoring at the baseline sites during the first year after construction is complete to assess the effectiveness of mitigation measures, with a commitment to further mitigation if necessary, technically feasible and practical.	Province (Province for “commitment to further mitigation if necessary, technically feasible and practical” only)/ Design-Builder	Moderate
9.7	Consult with the CoD and CoS to look for opportunities to use tree planting and landscaping to mitigate potential visual, noise and air quality impacts.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor

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9.8	Participate in meetings with affected communities and residents to address site-specific noise issues in the event that late evening or night time construction works prove necessary in the vicinity of residential areas.	Design-Builder	Minor
9.9	Perform pre-condition surveys to document existing state of buildings and facilities in the vicinity of SFPR construction activities as per standard geotechnical BMPs. This will form the baseline conditions, against which post-construction condition surveys will be carried out to assess any vibration impacts to buildings and facilities as a result of Project construction.	Design-Builder	Moderate
9.10	Monitor ground vibrations, as per standard geotechnical BMPs, adjacent to buildings to confirm that vibration levels are within ranges expected to avoid construction-related vibration.	Design-Builder	Moderate
10.0 Contaminated Sites and Property Acquisition			
10.1	Ensure that potential site contamination is investigated, and managed in compliance with the Contaminated Sites Regulation (<i>Environmental Management Act</i>), during all stages of project development including property acquisition, design and construction.	Province/Design-Builder (in accordance with this Agreement)	Major
10.2	Assess all Tier 1 and Tier 2 properties required for the ROW for potential contamination prior to construction and take steps, as required, to investigate and address site contamination that may exist.	Province/Design-Builder (in accordance with this Agreement)	Moderate
10.3	Manage any contaminated groundwater encountered in accordance with the requirements of the <i>Environmental Management Act</i> and associated regulations.	Design-Builder	Major
10.4	Undertake risk assessment and remediation activities, as required, and manage potential contamination in compliance with the provincial <i>Environmental Management Act</i> and Contaminated Sites Regulation.	Province/Design-Builder (in accordance with this Agreement)	Major
10.5	Should contaminated groundwater be identified along the route, include measures to control/mitigate the potential for impacts to surface water in future stormwater design.	Design-Builder	Major
10.6	Notify MoE of potential migration of contaminants from known or identified Tier 1 off-corridor properties of concern discovered during supplementary investigations or Project-related activities and use information to manage and mitigate contaminated sites issues prior to construction.	Design-Builder	Moderate
10.7	As part of the CEMP, the Contaminated Sites Management, Construction and Hazardous Waste Management and Spill Management and Emergency Response Plans, develop and implement a protocol for identifying and managing contaminated and potentially contaminated materials during the construction phase of the Project.	Design-Builder	Major

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11.0 Fisheries			
11.1	Ensure that all works and activities associated with the construction, operation and maintenance of the project are conducted in compliance with the <i>Fisheries Act</i> . This includes implementing mitigation measures and best management practices to ensure that the project does not cause any unauthorized harmful alteration, disruption or destruction of fish habitat, that the project does not cause any harm or mortality to fish, and that the project does not cause or result in the deposit of a deleterious substance of any type, including sediment, into a watercourse that is frequented by fish.	Design-Builder	Severe
11.2	Obtain an authorization under subsection 35(2) of the <i>Fisheries Act</i> for any unavoidable harmful alteration, disruption or destruction of fish habitat prior to relevant construction works or activities.	Province/Design-Builder (in accordance with this Agreement)	Severe
11.3	Develop and construct fish habitat compensation measures that offset all project impacts to fish habitat. These fish habitat compensation measures will be constructed by the proponent as directed by Fisheries and Oceans Canada and in accordance with any s. 35(2) Fisheries Act authorizations.	Province/Design-Builder (in accordance with this Agreement)	Moderate
11.4	Implement appropriate measures to adequately mitigate the effects of the creation of impervious surfaces on volume of surface runoff, rate of runoff, and water quality. These will meet performance targets established in the Stormwater Management Plan Outline (July, 2007) for the project.	Design-Builder	Moderate
11.5	Establish and maintain riparian setback areas from drainage channels and watercourses in accordance with regulatory requirements.	Design-Builder	Moderate
11.6	Take all reasonable measures to prevent substances that may be harmful to fish from entering the aquatic environment at the construction sites in the proximity to fish and aquatic habitat, paying particular attention to discharges of suspended sediments, construction waste, handling of uncured concrete and other deleterious substances.	Design-Builder	Severe
11.7	Construct bridges for watercourse crosses in the vicinity of Delta Ravines (i.e. Norum, McAdam, Collings, Nelson View and Gunderson Creeks), as shown in plans attached to the Application (Technical Volume 1) and over a minimum 450 m portion of the Fraser Heights Wetlands, using the design and the construction methods outlined in the draft Fraser Heights Wetlands Bridge Preliminary Design Report.	Province (Province for Fraser Heights Bridge only)/Design-Builder	Severe

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11.8	Obtain input from the Musqueam Indian Band and other participating First Nations to identify appropriate measures to mitigate potential project related impacts on the identified interests of the Musqueam Band in relation to fisheries and habitat matters. Identify potential opportunities for mutually agreeable opportunities to assist in advancing the fisheries interests of the Musqueam Indian Band or other participating First Nations.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
11.9	Review with the applicable regulatory agencies, including but not limited to DFO and MOE, proposals for compensation habitat, including opportunities for habitat to be constructed in advance of other Project construction (i.e. “habitat banking”), to determine the ratio of habitat types and to which drainage compensation will apply.	Province/Design-Builder (in accordance with this Agreement)	Moderate
11.10	Follow BMPs in the construction of all new ditches and stormwater watercourses.	Design-Builder	Moderate
11.11	Retain maintenance responsibility for compensation sites within the Project limits. For sites constructed in areas outside of the Project limits, establish site-specific agreements for access and maintenance with the relevant stakeholder/landowner.	Design-Builder (for Project Work in accordance with Section 2.6 of this Schedule only)	Minor
12.0	Water Quality		
12.1	Ensure that the construction works and operations for the Project are conducted in compliance with environmental requirements and BMPs in order to avoid impacts to water quality.	Design-Builder	Moderate
12.2	Develop and implement a Surface Water Quality and Sediment Control Plan and provide the plan for review and comment by relevant environmental agencies at least 30 calendar days prior to the start of relevant construction activities.	Design-Builder	Severe
12.3	Sample water from potentially impacted drinking water wells to assess potential adverse effects to water quality associated with during construction and operation phases of the project. Provide sampling water quality data to the local health authority for review and comment.	Design-Builder	Moderate

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12.4	<p>The Surface Water Quality and Sediment Control Plan will at a minimum:</p> <ul style="list-style-type: none"> ○ Identify requirements for additional water quality monitoring prior to and during construction to ensure preventative and mitigation measures can be taken as appropriate, to avoid impacts to water quality; ○ Identify potential water quality contaminants of concern generated by construction activities and associated preventative and mitigative measures; ○ Include a BMP maintenance plan to ensure BMPs implemented are functioning as designed and corrective actions are taken when required; and ○ Be submitted to the applicable regulatory agencies at least 30 calendar days prior to start of construction activities for review. 	Design-Builder	Moderate
13.0 Wildlife and Vegetation			
13.1	Ensure that the design, construction, and operation of the project, avoids where practical and technically feasible, impacts to vegetation and wildlife.	Design-Builder	Moderate
13.2	Prepare and implement a Wildlife and Habitat Management Plan to avoid and, where necessary, mitigate potential impacts to vegetation, wildlife and wildlife habitat. Provide the Plan to relevant regulatory and reviewing agencies for review and comment at least 30 calendar days prior to relevant construction activities beginning. The Wildlife and Habitat Management Plan will include best practices including but not limited to those identified in the Application (Table 7.717, draft Wildlife Mitigation Crossing Plan (April 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)], and Zones of Influence memo (July 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] in order to avoid, and where necessary, mitigate potential effects on vegetation and wildlife. This plan will also identify protocols for the survey and salvage of vegetation and wildlife as appropriate and required.	Design-Builder	Severe
13.3	Develop and implement mitigation measures to avoid and minimize impacts to wildlife during construction and operation of the project including, but not limited to those measures identified in the Application (September, 2006), draft Wildlife Mitigation Crossing Plan (April 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] and Zones of Influence Assessment memo (July 2007) [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)].	Design-Builder	Severe

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13.4	During the design phase, MoT will finalize its determination of the type and location of sound barriers to be constructed along the perimeter of Burns Bog. For the south-western alignment (adjacent to Crescent Slough), this design will include the construction of a solid sound barrier or a barrier that will provide equivalent mitigation. MoT will ensure on-going consultation with TC, EC, MoE and other IAERC members as appropriate, during design regarding the proposed type and location of sound barriers to be installed around Burns Bog.	Province	
13.5	Consult with the MoE and the Canadian Wildlife Service (CWS) of Environment Canada, to identify suitable compensation, including but not limited to that identified in the Wildlife and Habitat Management Plan and Habitat Compensation Plan (February, 2007) [replaced by Habitat Compensation Plan (May 2007)], to address residual effects on vegetation and wildlife as a result of the Project.	Province	
13.6	<p>Work with reviewing and regulatory agencies to develop and implement a comprehensive and long term Mitigation Monitoring Plan (MMP) [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan], based on the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007) [replaced by the SFPR Vegetation and Wildlife Mitigation Monitoring Plan], to monitor the effectiveness of proposed mitigation measures in addressing Project-related effects on vegetation and wildlife, including species at risk.</p> <p>Data collection and monitoring in support of the implementation of the MMP will begin prior to construction and continue for a period of time, to be determined with relevant regulatory agencies, during operation.</p> <p>Information collected in relation to the MMP will be used to guide detailed planning of mitigation, assess the effectiveness of such mitigation, and determine where additional measures may be required.</p> <p>The MMP will include scientifically defensible thresholds or performance measures to facilitate the evaluation of the effectiveness of mitigation.</p>	Province	
13.7	Undertake site-specific vegetation surveys in accordance with the regionally supported <i>Protocols for Rare Plants Surveys</i> , to identify the presence and distribution of red- and blue-listed plants species prior to final design and construction. Provide information on the presence and distribution of such plants species to MoE for review and use the information to guide final design and construction to avoid or mitigate impacts to these species.	Design-Builder	Moderate
13.8	Avoid direct impacts to sensitive red and blue listed plant communities where possible and adhere to construction exclusion windows determined by regulators.	Design-Builder	Major

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13.9	Develop a plan for salvaging plants and seeds, for review by MoE, where impacts to red and blue listed plant species cannot be avoided, for replanting off-alignment.	Design-Builder	Minor
13.10	Make all reasonable efforts to avoid impacts to confirmed streambank lupine habitat and confirmed stream bank lupine seed banks in the project corridor, as identified in consultation with the Streambank lupine recovery team,, during design construction and operation of the Project. Where impacts to such areas cannot be avoided, work with the Ministry of Environment and the Streambank Lupine Recovery team to identify and carry out appropriate mitigation measures including, but not limited to, the stockpiling of soil containing streambank lupine seeds.	Design-Builder	Minor
13.11	Undertake pre-construction bird nest surveys and restrict clearing during the breeding season. Pre-construction bird nest surveys will include, but not necessarily be limited to the following: <ul style="list-style-type: none"> o Conduct pre-construction raptor, heron or any listed species nest and roost tree surveys, consistent with applicable BMPs, to determine presence of active/inactive raptor and heron nests in the corridor and work scheduling with respect to the nest locations and applicable timing restrictions; o Prepare pre-construction bird nest survey protocols should works include clearing of vegetation during the general bird breeding time period as determined by MOE; o Conduct pre-construction bird nest surveys to the satisfaction of the MOE should the Design-Builder intend to seek approval from the MOE for vegetation clearing within the bird breeding time period (defined by MOE) in any year during the Term. 	Design-Builder	Moderate
13.12	Consult with MoE on the development and implementation of an Invasive Species Management Plan to address potential effects of the project related to the spread of invasive plant and aquatic wildlife species within the project corridor.	Design-Builder	Moderate
13.13	Include large mammal crossings adjacent to the perimeter of Burns Bog. The final number and location of wildlife crossings will be identified in the Wildlife Mitigation Crossing Plan [replaced by the Wildlife and Wildlife Habitat Mitigation Plan (September 2008)] which will be finalized in consultation with MoE and EC.	Province (Province for development of Wildlife and Wildlife Habitat Mitigation Plan and design and construction of large mammal crossings identified in work carried out by Province only)/ Design-Builder	Moderate

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13.14	Follow the design criteria outlined in the MOT Manual of Aesthetic Design Practice and the MOT Landscape Policy and Design Standards that form the landscape and site restoration design criteria for the Project.	Design-Builder	Minor
13.15	Use data collected through the MOT administered Wildlife Accident Reporting System to identify areas of increased wildlife collisions and to monitor direct effects on wildlife.	Design-Builder	Minor
13.16	Identify the location of sensitive wildlife habitats, including but not limited to habitat for species at risk, red and blue listed plant communities and high biodiversity habitats, on detailed design drawings in order to avoid or minimize potential effects to these areas.	Design-Builder	Moderate
14.0	Species at Risk		
14.1	Ensure that all reasonable measures are taken to avoid or lessen effects of the Project on listed wildlife species and their critical habitat and that potential effects that could occur are monitored. All mitigation and monitoring measures will be undertaken in a manner that is consistent with applicable recovery strategy and actions plans.	Province (Province for monitoring carried out by Province only)/ Design-Builder	Moderate
14.2	Undertake a salvage program for Pacific water shrew from, at a minimum, high and moderate-rated habitat adjacent to the SFPR. Other areas potentially requiring salvage will include lower-rated habitat, connected to higher-rated habitat, and will be determined in consultation with MoE and the PWS Recovery Team.	Design-Builder	Moderate
14.3	Consult with MoE regarding the mitigation of potential effects on Pacific water shrew, and take all practical steps to apply the most recent Pacific water shrew best management practices to address potential effects, including identifying additional opportunities to avoid direct effects to areas, designated as critical habitat by the PWS Recovery Team, during design, construction and operation.	Design-Builder	Minor
14.4	Consult with MOE to develop a mitigation and compensation strategy for Pacific water shrew, where opportunities are available, based on habitat quality and connectivity to surrounding habitat. Undertake sampling program, where required, to determine the presence and distribution of Pacific water shrew to support detailed design of mitigation.	Province	

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14.5	Detailed design of wildlife crossing mitigation for southern red-backed vole (RBV) will be conducted assuming the presence of RBV in high and moderate rated habitat identified in the EA. Monitoring of the use of wildlife crossing structures will include provisions for assessing the use of such structures by RBV.	Province (Province monitoring of use of wildlife crossing structures only)/ Design-Builder	Minor
14.6	Undertake a review of local museum specimens to confirm the distribution of <i>Sorex rowheri</i> within the Lower Fraser Valley. Where possible, use findings to support detailed design of mitigation.	Province (Province for review of local museum specimens only)/ Design-Builder	Minor
14.7	Use information obtained through the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)] to support detailed planning of mitigation to address potential noise, visual and collision effects of the project on barn owl. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)].	Province (Province mitigation monitoring only)/Design-Builder	Minor
14.8	Use information obtained through the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)] to support detailed planning of mitigation, including pre-construction salvage where appropriate, to address potential effects of the project, including those related to collision and changes in hydrology, on redlegged frog and western toad. Undertake long term monitoring of the effectiveness of such mitigation as part of the implementation of the Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan (February 2008)].	Province (Province mitigation monitoring only)/Design-Builder	Minor
14.9	Consult with MOE to plan and undertake at least one preconstruction, one construction and two operational inventories of at-risk aquatic insects in habitat known to or suspected of supporting such species and potentially affected by the project, including but not necessarily limited to the Fraser Heights Wetland, to confirm the findings of the environmental assessment and to monitor potential impacts of the project on aquatic insects.	Province	

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
14.10	Consult with the Canadian Wildlife Service to develop and implement a Mitigation Monitoring Plan [currently known as the SFPR Vegetation and Wildlife Mitigation Monitoring Plan] to monitor and assess the effectiveness of measures proposed to avoid or mitigate potential effects on Sandhill Crane. The Plan will identify: <ul style="list-style-type: none"> ○ species habitat requirements; ○ existing conditions in the project area; ○ potential project related effects and mitigation; ○ core indicators for assessing the effectiveness of mitigation; and ○ proposed study methodology and data interpretation and reporting protocols. 	Province	
15.0 Burns Bog			
15.1	Avoid potentially significant impacts to hydrological and ecological values associated with Burns Bog (i.e. alignment refinements to avoid ecological and hydrological values, development of hydrological mitigation that meet the hydrologic objectives identified).	Design-Builder	Major
15.2	Consult with the MV, CoD, MoE, EC, and the Burns Bog Management Planning Committee (BBMPC) and Scientific Advisory Panel (SAP) to ensure design, construction and operation of the Project complements long term management objectives established for the Burns Bog Ecological Conservation Area.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Moderate
15.3	Consult with the reviewing agencies to finalize construction and post-construction monitoring requirements related to Burns Bog including, but not limited to, those identified in the Vegetation and Wildlife Mitigation Monitoring Strategy (April 2007) [replaced by the SFPR Vegetation and Wildlife Mitigation Monitoring Plan] . Monitoring requirements with respect to Burns Bog will include but not be limited to those relating to: air quality, water quality, water levels, red-listed plant communities, and wildlife.	Province	
15.4	Share environmental data from Burns Bog collected as part of the development of the SFPR project, with agencies responsible for the management of the Burns Bog Ecological Conservancy Area in order to support the implementation of the long term management plan for the Bog.	Province/Design-Builder	Minor

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Ref	Objective Commitments and Assurances	Delivered By ¹	Performance Mechanism Index
15.5	<p>Design, construct and operate hydrology mitigation infrastructure, to mitigate potential effects of the project on the hydrology of Burns Bog, in a way that meets the following performance objectives:</p> <ul style="list-style-type: none"> ○ Site specific solutions – The design, construction and operation of hydrology mitigation will be based on, and take into account, site specific conditions. ○ Compatibility between highway water management and bog water management – Providing for active water level controls in the Bog that are independent of SFPR-related water management. ○ Prevention of mineral migration into the Bog. – Where indicated, providing a low permeability barrier between the SFPR highway ditch and the lagg ponds/ditches by: using material to construct the berm that supports appropriate vegetation on the berm and prevents the introduction of mineral material into the Bog; and maintaining hydraulic gradients so that Type 1 bog waters flow toward the highway at all times. ○ Resilience – Providing a design that is sufficiently robust to maintain and actively manage water levels under average and extreme conditions and if Bog conditions change. ○ Highway and mitigation construction does not preclude future restoration of Burns Bog – Providing flexibility of design that allows, for example, for future water control structures that allow for raising of water level as part of future bog restoration. ○ Holistic design – Hydrology mitigation concepts are designed in way that ensure they will be compatible with, and help achieve multiple, mitigation requirements. <p>As the design of hydrology mitigation is advanced, it will be documented in a Hydrology Work Plan [currently known as Hydrology Workplan (Burns Bog)]. This document will be finalized prior to commencement of pre-load activities around Burns Bog.</p>	Province (Province development of hydrology work plan and for work carried out by Province only)/ Design-Builder	Major
15.6	Pre-load activities around Burns Bog, including areas north of the Highway 99 interchange and west of Nordel Way, will not commence until TC (and other decision-making authorities as required) has reviewed and is satisfied with the final Hydrology Work Plan and the status of the hydrology mitigation design.	Province	
15.7	Provide opportunities for the active involvement of agencies responsible for the management of the Burns Bog Ecological Conservancy Area, and the Scientific Advisory Panel (SAP), in the design, construction and operation of project related works adjacent to Burns Bog including but not limited to those proposed as mitigation for potential project related effects.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
15.8	Consult with MV, CoD, EC and MoE on the development of a water balance model and a drainage model to support the design, construction and operation of hydrology mitigation infrastructure adjacent to Burns Bog and support implementation of the Burns Bog Ecological Conservancy Area Management Plan.	Province	
15.9	Finalize an Air Quality Management Plan [currently known as SFPR Air Quality Management Plan (Burns Bog Segment)], in consultation with TC, EC and other IAERC members as appropriate, prior to commencing pre-loading activities around Burns Bog. This document will identify all technically and economically feasible mitigation measures to be implemented to prevent generation and transmission of dust during the pre-load and construction phases of the project.	Province	
15.10	Collect a minimum of 4 months of baseline dust fall monitoring between June and September 2008. Following the collection of this information, the MoT will meet with TC and EC to discuss the baseline monitoring information collected and the approach for continued data collection, prior to the commencement of pre-loading activities around Burns Bog (i.e., north of the Highway 99 interchange and west of Nordel Way).	Province	
15.11	Work co-operatively with the Tsawwassen First Nation to maintain appropriate access for TFN members to Burns Bog to facilitate TFN's harvesting rights pursuant to the Tsawwassen Final Agreement.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
15.12	Ensure that the development and operation of Stormwater management infrastructure does not compromise the ability to achieve hydrology mitigation objectives adjacent to Burns Bog.	Province (Province for work carried out by Province only)/Design-Builder	Moderate
15.13	Implement the monitoring and follow-up activities identified in the Screening document, for a period of five years after the project has commenced operation, to ensure the effectiveness of mitigation measures related to aerial deposition, hydrology, and Sandhill crane in the vicinity of Burns Bog.	Province	
16.0	Archaeology		
16.1	Ensure that the design, construction and operation of the Project is advanced in a way that avoids, or minimizes potential impacts to known archaeological sites, including the Nottingham Farm, St. Mungo and the Glenrose Cannery sites, as well as other sites that may be encountered during project planning and development.	Design-Builder	Moderate

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
16.2	Work with participating First Nations who have identified related interests within the context of the ongoing environmental review process and the BC Archaeology Branch regarding investigation of unsurveyed areas within the Project area assessed as having archaeological potential at an appropriate level for an archaeological impact assessment and develop mitigation measures consistent with the BC Archaeological Impact Assessment Guidelines.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major
16.3	Obtain a valid <i>Heritage Conservation Act</i> Section 14 Heritage Inspection Permit with adequate provisions to address requirements for investigations and potential impacts to previously unrecorded archaeological sites should they arise. Immediately report previously undocumented archaeological sites that come to light during the construction phase of the Project to the BC Archaeology Branch and participating First Nations.	Province (Province for obtaining Section 14 Heritage Inspection Permit only)/ Design-Builder	Major
16.4	Include required edits and revisions to the Application in the final <i>Heritage Conservation Act</i> Permit report.	Province	
16.5	Work with the Musqueam Indian Band and other interested First Nations in developing a mutually acceptable Site Management Plan (SMP) for the Glenrose / St. Mungo area [currently known as Archaeological Impacts and Mitigation Strategy St. Mungo and Glenrose Cannery], to encourage the preservation of archaeological deposits through the protection and management of archaeological and heritage resources during planning, design, construction and operation phases of the SFPR project. The Plan will include, but not be limited to: <ul style="list-style-type: none"> o a summary of existing information (archaeology and oral history); o summary of existing site conditions; o site management objectives (short, medium and long term); and o site management strategies (preconstruction, construction, post-construction phases). 	Province	
16.6	Develop and implement an archaeological mitigation program focused on intact archaeological deposits that includes systematic data recovery (excavation) and archaeological monitoring for the St. Mungo and Glenrose Cannery Sites. Develop methodology and sample size with input from the Archaeology Branch and First Nations. Obtain <i>Heritage Conservation Act</i> Section 14 Heritage Investigation Permits and Section 12 Alteration Permits prior to mitigation and/or alteration of known archaeological sites.	Province (Province for Province Permits only)/ Design-Builder	Major
16.7	Work with the Musqueam Indian Band and other interested First Nations in establishing a final design for the SFPR segment in the Glenrose / St. Mungo area focused on minimizing potential project related impacts on identified archaeological resources.	Province/Design-Builder (consultation roles of parties as set out in this Agreement)	Major

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
16.8	Work with the Musqueam Indian Band and other interested First Nations to further explore options/opportunities to establish appropriate First Nation recognition and/or interpretation measures in relation to the Glenrose / St. Mungo sites.	Province	
16.9	Undertake appropriate archaeological site impact mitigation measures, including construction monitoring and systematic data recovery (i.e., an archaeological excavation), at the St. Mungo and Glenrose Cannery archaeological sites and support these measures with field programs that involve the Musqueam Indian Band and other interested First Nations as appropriate. The proposed mitigation strategy will be based on an archaeological site management plan for the St. Mungo, Wet Site and Glenrose Cannery archaeological sites currently under development in conjunction with representatives of the Musqueam Indian Band.	Province (Province development of a mitigation strategy only)/ Design-Builder	Major
16.10	Report the discovery of previously undocumented archaeological sites that may come to light during the construction phase of the SFPR project to the British Columbia Archaeology Branch and interested First Nations. Engage an archaeologist to investigate and assess such sites under the terms and conditions of a Heritage Conservation Act permit.	Design-Builder	Major
16.11	Provide opportunities for members of the Musqueam Indian Band and other interested First Nations to participate in field programs supporting the implementation of archaeological site mitigation measures.	Design-Builder	Major
16.12	Notify and invite First Nations to participate in specified archaeological work that is to occur at identified archaeological sites within their respective asserted traditional territories.	Design-Builder	Major
17.0	Heritage		
17.1	Ensure that the design, construction and operation of the proposed project is advanced in a way that avoids, or minimizes potential impacts to heritage buildings	Design-Builder	Moderate

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
17.2	Consult with the Delta Heritage Advisory Commission and the Surrey Heritage Committee to define heritage interests and work with the Delta Museum and Archive to develop a photo record and inventory of potentially affected heritage houses.	Province (Province including “development of photo record and inventory of potentially affected heritage houses”)/Design-Builder (consultation roles of parties as set out in this Agreement)	Minor
17.3	Prior to construction, undertake pre-condition surveys with respect to heritage buildings, as further described in commitment 9.9.	Design-Builder	Moderate
17.4	Avoid, where practical and technically feasible, direct impacts to heritage buildings.	Design-Builder	Moderate
18.0	Navigable Waters		
18.1	Obtain regulatory approval related to crossings of designated Navigable Waters pursuant to the Navigable Waters Protection Act (NWPA), including but not necessarily limited to, McAdam Creek, Collings Creek, Manson Canal, and Crescent Slough, prior to commencement of works.	Design-Builder	Major
19.0	Socio-Economic		
19.1	Mitigate potential Project-related visual/lighting impacts through use of screening, fencing and landscaping in consultation with local government. Use dark-sky compliant lighting for the Project.	Province (Province for consultation with local government only)/ Design-Builder (consultation roles of parties as set out in this Agreement)	Minor

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Ref	Objective Commitments and Assurances	Delivered By¹	Performance Mechanism Index
19.2	Manage potential impacts to emergency response services by: <ul style="list-style-type: none"> ○ Ensuring emergency response plans (including a Spill Response Management and Emergency Response Plan) are in place during the construction phase of the Project, and updated annually, at a minimum; ○ Consulting first responders in Traffic Management Plan development; and ○ Consulting with local fire departments to ensure adequate access. 	Design-Builder	Major
20.0 Rail			
20.1	Avoid or minimize potential impacts from Project works and activities to rail corridors.	Design-Builder	Moderate
20.2	Notify Transport Canada of project works as required under the <i>Notice of Railway Works Regulations</i> . Notify the public and affected stakeholders in accordance with the <i>Railway Safety Act</i> .	Design-Builder	Major
20.3	Comply with Canadian transportation standards and regulations as well as the design specifications of the respective railway with regard to vertical and horizontal railroad clearance of new or upgraded infrastructure.	Design-Builder	Major
20.4	Minimize railroad closures during construction.	Design-Builder	Moderate

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Abbreviations and Acronyms

ALC	Agricultural Land Commission	EMP	Environmental Management Plan
ALR	Agricultural Land Reserve	ERP	Emergency Response Plan
Application	Environmental Assessment Application	HC	Health Canada
BBMPC	Burns Bog Management Planning Committee	IAERC	Inter-Agency Environmental Review Committee
BMP	Best Management Practices	MAL	Ministry of Agriculture and Lands
CEMP	Construction Environmental Management Plan	MMP	Mitigation and Monitoring Plan
CoD	Corporation of Delta	MoE	Ministry of Environment
CoS	City of Surrey	MoT	Ministry of Transportation
CWS	Canadian Wildlife Service of Environment Canada	MV	Metro Vancouver
DFI	Delta Farmers' Institute	PM	Particulate Matter
DFO	Fisheries and Oceans Canada	ROW	Right-Of-Way
EAC	Environmental Assessment Certificate	SAP	Scientific Advisory Panel (of the BBMPC)
EC	Environment Canada	TC	Transportation Canada

**SCHEDULE 7
QUALITY MANAGEMENT**

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Appendix A	Quality Manual
Appendix B	Design Quality Management Plan
Appendix C	Construction Quality Management Plan
Appendix D	Traffic Quality Management Plan
Appendix E	Environmental Quality Management Plan
Appendix F	Traffic Management Site Condition Rating Checklist – Sample

PART 1
QUALITY MANAGEMENT SYSTEM

1.1 Quality Management System

The Design-Builder shall develop and implement a Quality Management System in accordance with the requirements of this Schedule. The Design-Builder acknowledges and agrees that the Design-Builder is solely responsible for the quality of the Project Work and that the effective implementation of a comprehensive Quality Management System is a critical component of the proper and timely completion of the Project Work.

1.2 Design-Builder Responsibilities

The Design-Builder is responsible for all quality assurance and quality control activities required to manage its own processes as well as those of its Subcontractors. The Design-Builder shall ensure that all aspects of the Project are the subject of a Quality Management System that complies with the provisions of this Schedule, and shall comply with and cause each of its Subcontractors and the employees of each of them to comply with the requirements of such Quality Management System. For greater certainty, and without limiting the Design-Builder's ability to contractually assign matching responsibilities and obligations to the Subcontractors in accordance with this Agreement, the Design-Builder shall not be relieved of any of the Design-Builder's responsibilities or obligations set out in this Schedule by the assignment of such responsibilities or obligations to its Subcontractors.

1.3 Quality Management System Requirements

The Quality Management System shall address all aspects of the Project Work for all phases of the Project, including Design and Construction. The Quality Management System shall be integrated into all Project Work, including environmental management, traffic management, safety management and communications activities. The Quality Management System shall include all quality control and quality assurance activities for all aspects of the Project Work for all phases of the Project.

The Quality Management System shall, at a minimum, include the Quality Documentation described in Part 5 [Quality Documentation] of this Schedule and shall comply with:

- (a) the requirements and principles of the ISO 9001:2015 Standard and any other applicable standards specified in this Schedule;
- (b) the Project Requirements;
- (c) Good Industry Practice; and
- (d) all other requirements set out in this Schedule and this Agreement.

1.4 Compliance

1.4.1 Performance Measures

PQ1.4.1a The Quality Management System must be compliant with the ISO 9001:2015 Standard in accordance with Section 1.3(a) of this Schedule.

1.4.2 Specific Requirements

The Design-Builder shall update its Quality Management System and all Quality Documentation as required to ensure that the Quality Management System and all Quality Documentation is and at all times remains in full compliance with the ISO 9001:2015 Standard and the requirements of this Schedule.

1.5 Documentation Deliverables

1.5.1 Performance Measures

Without limiting the generality of Section 1.3 [Quality Management System Requirements] of this Schedule, the Design-Builder will prepare and submit to the Province’s Representative, by the dates shown in Table 1.5.1, each of the following:

Table 1.5.1 Schedule of Plans and Reports (Response Time Measures)

Performance Measure	Deliverable Name	Due Date	Specification Reference	Review Procedure or Consent Procedure
PQ1.5.1a	Quality Manual	Submitted 30 days from the Effective Date	Appendix A	Consent Procedure
PQ1.5.1b	Design Quality Management Plan	Submitted 30 days from the Effective Date	Appendix B	Consent Procedure
PQ1.5.1c	Construction Quality Management Plan	Submitted 45 days from the Effective Date	Appendix C	Consent Procedure
PQ1.5.1d	Traffic Quality Management Plan	Submitted 45 days from the Effective Date	Appendix D	Consent Procedure
PQ1.5.1e	Environmental Quality Management Plan	Submitted 30 days from the Effective Date	Appendix E	Consent Procedure
PQ1.5.2a	Other Quality Management Plans (see below)	Submitted 45 days from the Effective Date	1.5.2	Review Procedure
PQ4.1.1a	Quality Audit Plans	Submitted 90 days from the Effective Date	4.1.1	Consent Procedure
PQ4.1.1b	Quality Audit Plans Updates	At twelve monthly intervals	4.1.1	Review Procedure
PQ5.9.1a	Monthly Quality Management System reports	By 15th of each following month	5.9.1	N/A
PQ4.2.2b	Quality Audit Reports	Within 14 days of audit completion	4.2.2	N/A

The documents above that are indicated to be subjected to the Consent Procedure or the Review Procedure shall be submitted to the Province’s Representative in accordance with the Consent Procedure or the Review Procedure, as the case may be, pursuant to Schedule 2 [Representatives,

Review Procedure and Consent Procedure]. All other documents shall be submitted to the Province's Representative.

1.5.2 Specific Requirements

The Design-Builder shall prepare and submit a Quality Management Plan for any other person contracting with the Design-Builder or any Subcontractor for the purposes of undertaking any material and substantial aspect of the Project Work (but excluding legal advisors) in each case for undertaking the activities covered by that party's contract with the Design-Builder or such Subcontractor (as the case may be) and meeting the requirements of the Quality Manual.

1.6 Timing of Implementation

1.6.1 Performance Measures

PQ1.6.1a The Quality Manual and all Quality Management Plans must be fully implemented within 120 days from the Effective Date.

1.6.2 Specific Requirements

The Design-Builder shall not commence or permit the commencement of any aspect of the Project Work before those parts of the Quality Documentation that concern such aspect of the Project Work have been submitted to the Province's Representative in accordance with this Schedule under the Consent Procedure or the Review Procedure, as the case may be.

1.7 Compliance with Quality Management System

The Design-Builder shall ensure that:

- (a) it complies with the Quality Management System detailed in the Quality Manual and any other Quality Documentation, including the Design Quality Management Plan, the Construction Quality Management Plan, the Traffic Quality Management Plan, the Environmental Quality Management Plan, in connection with the Project Work and all other activities under this Agreement;
- (b) the Designer complies with the Design Quality Management Plan and any other Quality Documentation in connection with its design and construction-related activities;
- (c) any other person contracting with it or any Subcontractor complies with the relevant Quality Management Plan prepared and implemented pursuant to Section 1.5.2 [Specific Requirements] of this Schedule in connection with the activities covered by that party's contract with it or such Subcontractor (as the case may be); and
- (d) any other person who performs any portion of the Project Work shall comply with the Quality Management System as it relates to that portion of the Project Work.

The means by which the above requirements are communicated, understood and verified shall be documented in the Quality Records.

1.8 Continual Improvement

- (a) The Design-Builder shall implement a program and shall have mechanisms in place, such as management reviews and Quality Audit programs, to allow all identified Opportunities for Improvement to be recorded, tracked and implemented, and closed out.
- (b) The program shall be used to continually improve the effectiveness and efficiency of the Design-Builder's Quality Management System.
- (c) The Design-Builder shall ensure that all of the Design-Builder's employees and Subcontractors are aware of the importance of continual improvement and are actively engaged in its implementation in connection with the performance of the Project Work.

**PART 2
QUALITY PERSONNEL**

2.1 Quality Director

- (a) At all times until the Total Completion Date, the Design-Builder shall employ a Quality Director who shall, irrespective of such person's other responsibilities, have defined authority for ensuring the establishment and maintenance of the Quality Management System and auditing and reporting on the performance of the Quality Management System.
- (b) The Quality Director shall have experience in a similar quality management representative role for a successful project of similar scope and complexity and shall have successfully completed an ISO 9001 Lead Auditor Course.
- (c) The identity of the Quality Director (and any replacement) and the Quality Director's job specification and responsibilities shall be subject to the approval of the Province (such approval not to be unreasonably withheld or delayed), and the Quality Director shall be a Key Individual subject to the requirements of Section 3.3(b) of Schedule 2 [Representatives, Review Procedure and Consent Procedure].
- (d) Without limiting the generality of the foregoing, the job specification and responsibilities of the Quality Director shall include the following:
 - (i) developing, implementing and maintaining, and ensuring the effective operation of, the Quality Management System;
 - (ii) verifying Quality Documentation conform to applicable Project Requirements prior to submission to the Province;
 - (iii) coordinating with Quality Managers and other quality personnel to ensure integration of the Quality Management System with and between all Project disciplines;
 - (iv) initiating management reviews, not less frequently than annually, and taking other actions necessary to ensure the effective operation and continual improvement of the Quality Management System;

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- (v) approving and signing off on all Quality Management System documents, including all revisions;
- (vi) scheduling and coordinating Independent Quality Audits with the Independent Quality Auditor;
- (vii) preparing Quality Audit Plans and managing (including scheduling and coordinating) Internal Quality Audits and External Quality Audits of all key processes with the Design-Builder's personnel and with the Subcontractors (including the Designer);
- (viii) ensuring that all Quality Audits required under Section 4.2 [Design-Builder's Quality Audits] of this Schedule and under the Quality Documentation are conducted, and reporting the findings of such audits to the Province's Representative;
- (ix) having the authority to immediately stop any work or activity which is not being performed or carried out in accordance with the Quality Documentation applicable thereto;
- (x) liaising with the Province's Representative and acting as the primary representative for the Design-Builder on all matters relating to quality management;
- (xi) preparing and submitting to the Province's Representative monthly Quality Management System reports;
- (xii) ensuring that relevant Records are maintained and retained in accordance with this Agreement, the Quality Management System and the Records Management Protocol;
- (xiii) developing and implementing a program for Correction, and where applicable, Corrective Action in respect of Nonconformities;
- (xiv) developing and implementing a program for Opportunities for Improvement in respect of potential Nonconformities or continual improvement initiatives;
- (xv) approving and signing off on the action taken in close out of Nonconformity Reports in accordance with Section 6.1 [Nonconformity Reporting Process] of this Schedule; and
- (xvi) carrying out any other matters which, in accordance with this Agreement, are the responsibility of the Quality Director.

2.2 Quality Managers

- (a) The Design-Builder shall appoint Quality Managers, each with experience in a similar role for successful projects of similar scope and complexity, who shall be responsible for the Quality Management Plans developed by the Design-Builder including the DQMP, CQMP, TQMP and EQMP.

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- (b) Each Quality Manager shall have at a minimum successfully completed an ISO 9001 Lead Auditor Course, except for the Quality Manager for the EQMP, who shall be an environmental professional with experience in environmental management and/or planning who shall have completed either an ISO 9001 Lead Auditor Course or an ISO 14001:2004 Environmental Management Systems Lead Auditor Course.
- (c) The Quality Manager for the DQMP shall be a Professional Engineer.
- (d) All Quality Managers shall be independent of the Design and Construction and shall report directly to the Quality Director.

PART 3 TESTING

3.1 Testing Requirements

Where the Design-Builder is required by this Agreement, any of the Project Requirements, the Design and Certification Procedure or any Quality Documentation to carry out any calibration, sample, test or trial, such calibration, sample, test or trial shall be carried out in accordance with the following provisions of this Part 3 and the provisions of the relevant Quality Documentation.

3.2 Accreditation Standards

- (a) All on and off Project Site calibrations, samples, tests and trials shall be carried out by laboratories that are duly accredited for the carrying out of such calibrations, samples, tests and trials.
- (b) Laboratory accreditation shall be in accordance with ISO/IEC 17025, as amended, updated or replaced from time to time, provided that, for specific activities, the Province may, in accordance with the Consent Procedure, accept other industry-recognized accreditation in lieu of ISO/IEC 17025, including:
 - (i) concrete and concrete materials: CAN/CSA A283, “Qualification Code for Concrete Testing Laboratories”, to the appropriate category for the tests being done;
 - (ii) structural steel and welding: CAN/CSA W178.1, “Certification of Welding Inspection Organizations”, to the level appropriate for the inspection being carried out;
 - (iii) aggregates, bituminous paving mixtures: “Canadian Council of Independent Laboratories”, as appropriate to the work being carried out; and
 - (iv) protective coatings: “National Association of Corrosion Engineers”, as appropriate to the work being carried out.
- (c) The Design-Builder may request the approval of the Province to use other industry-recognized accreditations, which approval shall not be unreasonably withheld or delayed if such other accreditation is applicable to the Project Work for which it is proposed and meets the intent of ISO/IEC 17025.

3.3 Material Verification Testing

For all materials incorporated into the Project Work, the Design-Builder shall have a laboratory, registered as a corporation in Canada and accredited in accordance with this Agreement, carry out verification of the materials as follows:

- (a) test and verify that the material meets the requirements of the Design;
- (b) perform verification testing on, but not limited to, materials such as structural steel, miscellaneous steelwork, cement, aggregates, supplementary cementing materials, additives, reinforcing steel, fasteners, bolts, anchor rods, and welding consumables;
- (c) verify that the mill certificates for the material and any other material certifications are valid;
- (d) perform verification testing of steel for boron content; and
- (e) stamp the mill certificates and any other material certifications with the name of the laboratory, the laboratory's authorized officer, and the names and signatures of the inspectors and testers.

3.4 Structural Component Inspection and Testing

- (a) For manufacturing and fabrication of components incorporated into a Structure, including but not limited to, structural steel, fabricated steel elements, steel piles, steel strands, stay cables and pre-cast concrete (the "**Structural Components**"), the Design-Builder shall, as a minimum, employ independent testing and inspection companies registered as corporations in Canada and certified by organizations accredited by the Standards Council of Canada to provide the following:
 - (i) full time quality inspection and testing at the mills and fabrication facilities, under the on-site direction of a Professional Engineer, while the manufacture and fabrication works are in process;
 - (ii) quality reports and assurances produced under the direction of the Professional Engineer identified in Section 3.4(a)(i) of this Schedule:
 - (A) at the following milestones:
 - (1) upon supply of raw materials to the fabricator; and
 - (2) at 25%, 50%, 75% and 100% fabrication completion stages; and
 - (B) including a record of the fabrication activities and testing and inspections to date including Nonconformities, Corrections and Corrective Actions;
 - (iii) monthly status reports, signed and sealed by the Professional Engineer identified in Section 3.4(a)(i) of this Schedule, which include a status of the stages of the manufacture and fabrication process carried out to the date of the report and a

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record of the quality reports and assurances identified in Section 3.4(a)(ii) of this Schedule carried out to the date of the report; and

- (iv) a full and final report, signed and sealed by the Professional Engineer identified in Section 3.4(a)(i) of this Schedule, following the completion of any manufacture and fabrication process including a summary of all stages of the manufacture and fabrication process and a record of the quality reports and assurances identified in Section 3.4(a)(ii) of this Schedule

and provide each of the reports identified in this Section 3.4 to the Province's Representative at the times and the milestones identified in this Section.

- (b) The Design-Builder shall notify the Province's Representative, no later than 60 days prior to shipping, of its intent to ship Structural Components to the Project Site.
- (c) The Design-Builder shall cause the responsible Professional Engineer identified in Section 3.4(a)(i) of this Schedule to provide a signed and sealed declaration that "by utilizing the standards of care, skill and diligence in accordance with the standards of the profession, the [insert name/description of the relevant Structural Components] have been manufactured and/or fabricated to meet the requirements of the specifications as attached [insert list of all relevant specifications]".
- (d) The Design-Builder shall cause the Designer (Principal) as required by Part 3 [Design and Certification Procedure] of Schedule 4 to provide a signed and sealed declaration that "by utilizing the standards of care, skill and diligence in accordance with the standards of the profession, the [insert name/description of the relevant Structural Components] have been manufactured and/or fabricated to meet the requirements of the relevant Design Data and the provisions of the Agreement".
- (e) The Design-Builder shall submit the declarations referred to in Sections 3.4(c) and 3.4(d) of this Schedule to the Province's Representative in accordance with the Review Procedure five Business Days prior to any Structural Components leaving the place of manufacture or fabrication.

3.5 Re-Inspection and Re-Testing of Steel Structural Components

- (a) For steel Structural Components manufactured or fabricated outside of Canada or the United States (the "**Applicable Steel Structural Components**"), the Design-Builder shall, prior to incorporation into the Project Infrastructure, re-inspect and re-test, at a location in Canada, 10% of each such Applicable Steel Structural Component by a company certified by the Canadian Welding Bureau in accordance with CSA W47.1 to Division 1 and by the Canadian Institute of Steel Construction in the category of steel bridges.
- (b) For each Applicable Steel Structural Component, the Design-Builder shall ensure:
 - (i) that such Applicable Steel Structural Component shall be in a configuration and location that facilitates all re-inspection and re-testing requirements;

- (ii) the re-inspection and re-testing of such Applicable Steel Structural Component shall be completed in accordance with the testing and inspection requirements of DBSS 421 Structural Steelwork and to ensure that such Applicable Steel Structural Component was not damaged during transportation and that the shop assembly is in accordance with DBSS 421 Structural Steelwork; and
 - (iii) that the re-inspection of the welding of such Applicable Steel Structural Component is carried out by a CAN/CSA W178.2 Level III certified welding inspector accredited with W47.1/W59 to inspect Applicable Steel Structural Components.
- (c) The Design-Builder shall provide to the Province's Representative the results of all re-inspection and re-testing of Applicable Steel Structural Components in accordance with this Section 3.5.

3.6 Remedial Work

The Design-Builder shall be responsible at its own expense for any remedial work required as a result of any failure to pass any calibration, sample, test or trial required in accordance with this Agreement, any of the Project Requirements, the Design and Certification Procedure or any Quality Documentation or as a result of any laboratory not being duly accredited as required by this Agreement.

PART 4 QUALITY AUDITS AND MONITORING

4.1 Quality Audit Plans

4.1.1 Performance Measures

PQ4.1.1a The Design-Builder shall provide the Quality Audit Plans to the Province's Representative within 90 days after the Effective Date.

PQ4.1.1b The Design-Builder shall provide updated Quality Audit Plans at twelve month intervals thereafter.

4.1.2 Specific Requirements

Quality Audit Plans shall detail the Internal Quality Audits and the External Quality Audits that shall be conducted by the Design-Builder on its own processes and those of its Subcontractors, and the planned dates of such Quality Audits.

4.2 Design-Builder's Quality Audits

4.2.1 General

The Design-Builder shall conduct Internal Quality Audits and External Quality Audits of its own processes and those of its Subcontractors (including the Designer) in accordance with the requirements of this Schedule, the Quality Documentation and the Quality Audit Plans referred to therein. The purpose of the Design-Builder's quality auditing process is to confirm that all

activities comprising the Project Work are in compliance with those documented in the Quality Management System (including the Quality Manual and Quality Management Plans), to identify all Nonconformities, necessary Corrective Actions and Opportunities for Improvement, and to facilitate continual improvement.

4.2.2 Performance Measures

PQ4.2.2a The Quality Director shall schedule Internal Quality Audits and External Quality Audits to ensure that all key processes are reviewed regularly (at least annually).

PQ4.2.2b Within 14 days of completion of any Quality Audit, the Design-Builder shall document, or cause to be documented, the results of such Quality Audit in an audit report and make such report available to the Province's Representative.

4.2.3 Specific Requirements

- (a) Internal Quality Audits and External Quality Audits shall be scheduled taking into account the status and importance of the processes being audited as well as the results of previous audits.
- (b) Internal Quality Audits and External Quality Audits shall be conducted by personnel independent of the area(s) being audited.
- (c) Where necessary, follow-up audits shall be scheduled to ensure that identified Corrections, Corrective Actions and Opportunities for Improvement are carried out in a timely fashion.

4.3 Province's Quality Audits

4.3.1 General

The Province shall, pursuant to the submission of the Quality Documentation in accordance with this Schedule, review the Quality Documentation to identify the critical activities and processes identified in the Quality Manual and Quality Management Plans on which the Province's auditing efforts and resources should be directed. The Province shall determine the frequency of auditing through regular and ongoing review of the Design-Builder's performance and management systems. Work procedures and activities that show good audit performance may have the frequency of auditing decreased, while those that show poor performance or increased risk may have the frequency of auditing increased. The Design-Builder shall provide and shall ensure its Subcontractors provide the Province's auditors with all documentation, records, access, facilities and assistance for the safety and convenience of the Province.

4.3.2 Types of Quality Audits

The following two types of Quality Audits may be conducted by, or on behalf of, the Province in its discretion:

- (a) Surveillance Quality Audits – Scheduled or unscheduled field audits conducted on a random basis or on specific areas of interest. The objective of these surveillance audits is to monitor the Design-Builder's activities involving the Project Work, including but not

limited to work practices, workmanship, performance measures and general quality of materials; and

- (b) Quality Management System Audits – Scheduled audits conducted at specific times to assess the performance of and compliance with the Quality Management System.

4.3.3 Audit Observations and Findings

The Province may, at any time and in its discretion, provide its observations and findings, including deficiencies, procedural or performance nonconformities, to the Design-Builder in an audit report.

Where the Province initiates a Nonconformity Report, the Design-Builder shall investigate, address and track the Nonconformity in accordance with Part 6 [Nonconformities] of this Schedule.

All other observations and findings identified by the Province and provided to the Design-Builder in an audit report, shall be reviewed and evaluated by the Design-Builder for Opportunities for Improvement.

4.3.4 Performance Measures

PQ4.3.4a The Design-Builder shall prepare a Corrective Action plan and submit it to the Province's Representative within 10 Business Days of receiving the report of the Province's Quality Audit.

The Province reserves the right to conduct follow up reviews to determine if the Design-Builder's Corrective Action plan has been implemented and completed.

4.4 Province Monitoring

In addition to carrying out any scheduled and unscheduled Quality Audits as provided in Section 4.3 [Province's Quality Audits] of this Schedule, the Province may, at its discretion, monitor and verify the operation of the Quality Management System by, inter alia, carrying out spot checks and making independent inspections and tests of any plant or material including any plant or material which fails any test or is suspected by the Province of not complying with the requirements of this Agreement.

4.5 Deficient Quality Audits

If either:

- (a) the Province reasonably believes that the Design-Builder is failing to conduct Quality Audits of its Quality Management System as required by this Agreement in any material respect or if such Quality Audits are not conducted in accordance with the ISO 9001:2015 Standard or the ISO 19011:2018 Standard by personnel competent to conduct such Quality Audits; or
- (b) any auditing, monitoring or spot checks of the Quality Management Systems reveal material deficiencies in the Quality Management System or the implementation thereof,

the Province may carry out increased levels of External Quality Audits (whether in number, duration or detail) of all or any aspect of the Quality Management System until such time as the Province is reasonably satisfied that none of the circumstances described in this Section 4.5 continue to exist.

4.6 Costs of Audits

If the Province carries out any audit pursuant to Section 4.3 [Province's Quality Audits], Section 4.4 [Province Monitoring] or Section 4.5 [Deficient Quality Audits] of this Schedule, and the results of such audit shows any material Nonconformity in respect of the Project Work, then without limiting any other rights and remedies of the Province, the Design-Builder shall compensate the Province for all costs incurred in carrying out such audit (including the relevant administrative expenses of the Province, including an appropriate sum in respect of general staff costs and overheads). All other audits carried out by the Province pursuant to Section 4.3 [Province's Quality Audits], Section 4.4 [Province Monitoring] or Section 4.5 [Deficient Quality Audits] of this Schedule shall be at the Province's cost.

4.7 Independent Quality Audits

- (a) In addition to Internal Quality Audits and External Quality Audits, the Design-Builder shall cause independent quality audits (each, an "**Independent Quality Audit**") to be undertaken during the Project Work. A full Independent Quality Audit on the QMS, including all Quality Management Plans, shall be completed within one year after the Effective Date and thereafter at least once per year until the Total Completion Date.
- (b) Each Independent Quality Audits shall be conducted by an independent quality auditor (an "**Independent Quality Auditor**") acceptable to the Province and the Design-Builder and certified by an accredited auditors' registration body, such as the International Register for Certified Auditors or Registrar Accreditation Board, who is qualified to audit the full scope of the QMS.
- (c) Each Independent Quality Audit shall, at a minimum, ensure that all input requirements as required by the Design-Build Agreement are included in the QMS and adhered to in the performance of the Project Work.
- (d) The Design-Builder shall cause the Independent Quality Auditor to prepare a report (the "**Independent Quality Audit Report**") that addresses all quality audit findings identified from the Independent Quality Audit, and to submit the Independent Quality Audit Report to the Province's Representative at the same time as the Independent Quality Audit Report is submitted to the Design-Builder.
- (e) All corrective measures addressed in an Independent Quality Audit Report shall be implemented and reported to the Province's Representative.

4.8 Traffic Management Auditing

- (a) If any Design-Builder or Province Traffic Management audit identifies any traffic management or safety Nonconformity, or if a Nonconformity is reported to or brought to the attention of the Design-Builder via any source, then the Design-Builder shall rectify such Nonconformity immediately.

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- (b) For complex temporary traffic control set-ups as detailed in Sections 13.5 [Temporary Traffic Control [Design] Road Safety Audit] and 13.6 [Temporary Traffic Control [On-Site] Road Safety Audit] of Part 2 of Schedule 4, the Road Safety Audit process shall be implemented in accordance with Article 13 [Road Safety Audit] of Part 2 of Schedule 4.
- (c) For the purpose of facilitating the conduct of Internal Quality Audits and External Quality Audits relating to the performance of traffic management (“**Traffic Management Auditing**”) in an active or inactive work zone with a traffic control set-up, the Design-Builder shall develop and implement a Site Condition Rating checklist acceptable to the Province, for use by each of the Design-Builder and the Province.
- (d) As a component of the Traffic Quality Management Plan, the Site Condition Rating checklist shall be submitted to the Province’s Representative in accordance with the Consent Procedure. Submissions of subsequent updates to the checklist shall be in accordance with Section 5.6 [Changes to Quality Documentation] of this Schedule.
- (e) The checklist shall provide the framework for auditing the safety and overall management of traffic within the Project Site against the requirements contained in the Traffic Management Plan, the requirements of Part 4 [Traffic Management] of Schedule 4 and the Traffic Management Manual (collectively, the “**Traffic Management Criteria**”).
- (f) The checklist, at a minimum, shall include the following information:
- (i) Traffic Management Plan – in relation to the approved site specific plan;
 - (ii) General Traffic Requirements – in relation to Article 1 [General Traffic Management Requirements] of Part 4 of Schedule 4, including:
 - Storage of materials
 - Traffic control devices
 - Roadside barriers
 - Drop-offs
 - Temporary Pavement Markings; and
 - (iii) Traffic Management Manual – in relation to all relevant requirements.

A sample Site Condition Rating checklist of Nonconformities is set out in Appendix F [Traffic Management Site Condition Rating Checklist - Sample] to this Schedule. For clarity, the sample checklist is not an exhaustive checklist and shall be considered a minimum, and the Design-Builder shall submit a checklist as set out in this Schedule based on specific work zone hazards and risks.

- (g) Each Nonconformity in the checklist shall be assigned a number of Site Condition Rating points (“**SCR Points**”) that reflects its relative importance in relation to the other listed Nonconformities. SCR Points shall be assigned to the Design-Builder for each occurrence of a Nonconformity with Traffic Management Criteria that is identified at the time of the relevant audit, at the site within the Project Site that is the subject of such audit. The aggregate of such assigned SCR Points shall indicate the applicable site condition rating (the “**Site Condition Rating**”) for the subject site as at the time of the relevant audit.

- (h) The following table sets out the Site Condition Rating categories and the number of SCR Points the assignment of which will result in assignment of a particular Site Condition Rating.

Site Condition Rating category	SCR Points
Category 1	1 – 25
Category 2	26 - 50
Category 3	51+

- (i) At a minimum, Traffic Management Auditing shall be carried out weekly and on a specifically selected temporary traffic control set-up. Traffic Management Auditing shall be planned taking into consideration the status, importance and level of risk of each traffic control set-up, and generally rotate through the traffic control set-ups implemented for the Project at that time.
- (j) The designation of Site Condition Rating categories “Category 1”, “Category 2”, and “Category 3”, as identified in Section 4.8(h) of this Schedule and as shown in the sample checklist set out in Appendix F [Traffic Management Site Condition Rating Checklist - Sample] to this Schedule, indicates the basis on which NCE Points will be assigned in accordance with Part 5 [NCE Points and Default Points] of Schedule 10 to this Agreement.
- (k) Copies of Traffic Management Auditing reports shall be provided to the Province within two Business Days following the audit.
- (l) The requirements of this Section 4.8 are in addition to, and do not limit, the Design-Builder’s other obligations under this Schedule, including the Design-Builder’s obligations in Part 6 [Nonconformities] of this Schedule.

**PART 5
QUALITY DOCUMENTATION**

5.1 Principles

The minimum requirements and principles which apply to the Quality Documentation are set out in Appendices A to F inclusive to this Schedule. The Design-Builder’s Quality Management System shall also comply with the requirements and principles of the ISO 9001:2015 Standard, this Schedule, and the principles of the ISO 9004:2015 Standard, including:

- (a) customer focus;
- (b) leadership;
- (c) engagement of people;
- (d) process approach;
- (e) improvement;

- (f) evidence-based decision making; and
- (g) relationship management.

5.2 ISO Reference Documents

Without limiting the requirement of the Quality Management System to comply with the ISO 9001:2015 Standard, the Design-Builder's Quality Management System shall also incorporate the requirements of the following:

- (a) ISO 9004:2009 Standard;
- (b) ISO 9000:2015 Standard; and
- (c) ISO 19011:2018 Standard.

5.3 Quality Documentation Requirements

The minimum documentation requirements for the Quality Management System are:

- (a) the Quality Manual as required pursuant to Section 1.5 [Documentation Deliverables] of this Schedule;
- (b) Quality Management Plans for all aspects of the Project Work as required pursuant to Section 1.5 [Documentation Deliverables] of this Schedule;
- (c) that the following are included in each Quality Management Plan:
 - (i) quality system procedures and process flow charts documenting who does the work, what they do, and what evidence shall be generated that they have done the work correctly;
 - (ii) the Quality Audit Plans required pursuant to Section 4.1 [Quality Audit Plans] of this Schedule;
- (d) Work Method Statements, as applicable;
- (e) Inspection and Test Plans, as applicable; and
- (f) the Records required pursuant to Section 5.8 [Quality Records] of this Schedule.

5.4 Submission of Quality Documentation

- (a) The Design-Builder shall prepare and submit all required Quality Documentation to the Province's Representative for review in accordance with the Consent Procedure or the Review Procedure, as the case may be in accordance with Section 1.5 [Documentation Deliverables] of this Schedule.
- (b) If any Quality Documentation relies on or incorporates any quality manual, plan, procedure or like document then such quality manual, plan, procedure or other document or the relevant parts thereof shall (unless the Province otherwise agrees) be submitted to

the Province's Representative at the time that the relevant Quality Documentation or part thereof or change, addition or revision to the Quality Documentation is submitted in accordance with the Consent Procedure or the Review Procedure, as the case may be, and the contents of such quality manual, plan, procedure or other document shall be taken into account in the consideration of the relevant Quality Documentation or part thereof or change, addition or revision to the Quality Documentation in accordance with the Consent Procedure or the Review Procedure, as the case may be. The Province may require the amendment of any such quality manual, plan, procedure or other document to the extent necessary to enable the relevant Quality Documentation to satisfy the requirements of this Schedule.

5.5 Design-Builder Obligation to Update

The Design-Builder shall be responsible for proactively updating its Quality Management System and all Quality Documentation from time to time, in accordance with the procedures set forth in this Agreement, to ensure that the Quality Management System and all Quality Documentation are, and at all times remain, relevant and in full compliance with the ISO 9001:2015 Standard and the requirements of this Agreement.

5.6 Changes to Quality Documentation

- (a) The Design-Builder may submit to the Province's Representative in accordance with the Review Procedure any proposed changes or additions to or revisions of any of the Quality Documentation.
- (b) Without limiting the generality of Section 5.6(a) of this Schedule, the Design-Builder shall from time to time submit to the Province's Representative in accordance with the Review Procedure any changes to any of the Quality Documentation required for such Quality Documentation to continue to reflect and comply with the requirements set out in this Schedule.
- (c) If the Design-Builder does not propose any change required pursuant to Section 5.6(b) of this Schedule, then the Province may propose such change and it shall be dealt with in accordance with the Review Procedure as though it had been proposed by the Design-Builder and shall not therefore be treated as a Province Change. Any dispute between the parties in respect of any such change shall be resolved in accordance with the Dispute Resolution Procedure.

5.7 Amendment of Quality Documentation

If there is no unresolved objection by the Province under the Consent Procedure or the Review Procedure, as the case may be, to a part of the Quality Documentation pursuant to Section 5.4 [Submission of Quality Documentation] of this Schedule or to a change, addition or revision proposed pursuant to Section 5.6 [Changes to Quality Documentation] of this Schedule, then the Quality Documentation shall be amended to incorporate such part, change, addition or revision.

5.8 Quality Records

- (a) The Design-Builder shall establish and maintain complete and accurate quality management records (the "**Quality Records**"), which shall form part of the Records.

- (b) The Quality Records shall provide objective evidence of conformance with all requirements of this Agreement, compliance with the ISO 9001:2015 Standard and the effective operation of the Quality Management System.

5.9 Quality Management System Reports

5.9.1 Performance Measures

- PQ5.9.1a** For each month, the Design-Builder shall prepare, and submit to the Province's Representative within 15 Business Days of the start of the following month, a comprehensive Quality Management System report.

5.9.2 Specific Requirements

- (a) The monthly Quality Management System report shall address all quality management activities under the Quality Manual and each of the Quality Management Plans for that month and any outstanding quality issues from prior months.
- (b) The monthly Quality Management System reports shall, as a minimum, include the following information separately identified for the Quality Manual and for each Quality Management Plan:
 - (i) a Nonconformity Report log summarizing the Nonconformity Tracking System and providing the following in respect of each Nonconformity Report: "date open", "date closed", "status" (open, pending, closed) and "description of Correction" (Repair, Rework, Reject, Use As Is);
 - (ii) a Corrective Action log providing details of the Corrective Actions performed to date and their close-out status;
 - (iii) an Opportunities for Improvement log summarizing the Opportunities for Improvement raised to date, including the following information: reference numbers, "date open", "status" (open, pending, closed), "date closed", and description of how it was closed;
 - (iv) a summary of any inspection and testing activities conducted during the month and a four month look-ahead schedule for planned inspection and testing activities;
 - (v) Internal Quality Audits and External Quality Audits, including any third party Quality Audits performed during the month and a four month look-ahead schedule for planned future Quality Audits;
 - (vi) any other information required to be included in the monthly Quality Management System reports pursuant to any of the Appendices to this Schedule or the terms of the relevant Quality Management Plan; and
 - (vii) any changes made to the Quality Management System or the Quality Documentation in compliance with the provisions of this Agreement.

5.10 Additional Information

- (a) The Corrective Action log and Opportunities for Improvement log as described in Sections 5.9.2(ii) and (iii) of this Schedule shall be:
 - (i) maintained and updated throughout the Term; and
 - (ii) made easily accessible to the Province.
- (b) Notwithstanding any other provision of this Schedule, the Design-Builder shall provide the Province's Representative with such information as the Province may request from time to time to demonstrate compliance with this Agreement, including this Schedule.

**PART 6
NONCONFORMITIES**

6.1 Nonconformity Reporting Process

The Nonconformity reporting process, from initial creation through to closeout, shall follow the process outlined below:

- (a) If the Design-Builder or the Province discovers a Nonconformity, it shall initiate a Nonconformity Report in accordance with the ISO 9001:2015 Standard, and as follows:
 - (i) the Design-Builder initiated Nonconformity Reports - Upon discovery of a Nonconformity, the Design-Builder shall, within two Business Days of discovering the Nonconformity, issue a Nonconformity Report identifying the problem and provide a copy of the Nonconformity Report to the Province's Representative; or
 - (ii) Province initiated Nonconformity Reports - If at any time the Province is notified, or otherwise becomes aware, that there is any Nonconformity relating to the Project Work, the Province may issue a Nonconformity Report, without prejudice to any other right or remedy available to the Province and BCTFA, including the assignment of NCE Points and/or Default Points pursuant to Schedule 10 [Payment and Performance Mechanism].
- (b) The Nonconformity Report is issued to the Quality Director, thereby activating the Nonconformity Report. The date of issue shall be recorded denoting the commencement of the time period for which the Nonconformity Report has an 'open' status.
- (c) The Design-Builder shall investigate and respond to all Nonconformity Reports.
- (d) The Quality Director shall in response to the Nonconformity Report describe a Correction of the Nonconformity and, if applicable, a Corrective Action in accordance with the ISO 9001:2015 Standard. A response time for the implementation of the Correction shall be included in the response.
- (e) Acceptable responses are set out in Table 6.1 for various scenarios.

Table 6.1 Acceptable Responses to Nonconformity Reports

Status of Nonconformity	Correction	Corrective Action (if applicable)
Correction has been undertaken	Describe nature of the Correction (Rework, Repair, Reject, Use As Is). Provide confirmation that the Correction has remedied (if applicable) the Nonconformity	Describe any improvements to process to prevent reoccurrence. Provide a plan committing to scope and timing of the Corrective Action.
Correction is proposed	Describe nature of the Correction (Rework, Repair, Reject, Use As Is). Provide a plan committing to scope and timing of Correction.	Describe any improvements to process to prevent reoccurrence. Provide a plan committing to scope and timing of the Corrective Action.
Objection to NCR and no Correction is proposed	N/A	N/A

- (f) The Quality Director shall change the status of the Nonconformity Report to ‘pending’ once a Correction, a response time and, if applicable, a Corrective Action has been documented for the Nonconformity in accordance with Section 6.1(d).
- (g) The Design-Builder shall rectify each Nonconformity in accordance with the Correction and, if applicable, the Corrective Action described in the Nonconformity Report.
- (h) Once the Nonconformity has been corrected, it shall be subject to verification by the Quality Director to demonstrate conformity to the requirements. The Quality Director shall then change the Nonconformity Report status to “closed” and shall provide a copy of the Nonconformity Report to the Province within two Business Days thereafter.
- (i) The Design-Builder may object to the issuance of any Nonconformity Report by the Province. If such objection has not been resolved by mutual agreement between the Province and the Design-Builder within five Business Days of delivery by the Design-Builder to the Province’s Representative of notice of the objection, then either the Design-Builder or the Province may refer the matter to the Dispute Resolution Procedure for determination.
- (j) If the Design-Builder fails to object to the issue by the Province of a Nonconformity Report within five Business Days, the Design-Builder is deemed to have accepted that Nonconformity Report.

6.2 Nonconformity Report Tracking System

The Design-Builder will implement and maintain a live, electronic, internet-based Nonconformity Tracking System to monitor the status of all Nonconformity Reports initiated by the Province and the Design-Builder.

- PQ6.2.1** The Nonconformity Tracking System shall be fully operating, with the following minimum requirements, within 90 days from the Effective Date:
- (a) comprise a single repository containing both the Design-Builder and Province initiated Nonconformity Reports;
 - (b) have the ability to attach supporting material such as photos and documents;
 - (c) provide live access to the current Nonconformity Report status to both the Design-Builder and the Province;
 - (d) automatically apply NCE Points to each Non-Compliance Event in accordance with Schedule 10 [Payment and Performance Mechanism];
 - (e) allow for the application of additional NCE Points to individual Nonconformity Reports in accordance with Schedule 10 [Payment and Performance Mechanism]; and
 - (f) produce monthly summary Reports for delivery to the Province's Representative of outstanding Nonconformity Reports, NCE Points and Default Points accrued within each performance threshold category in any given month, and the total NCE Points and Default Points accrued across all performance threshold categories in any given month.

6.3 Unremedied Nonconformity

The Province may issue further Nonconformity Reports if a Nonconformity identified in a Nonconformity Report continues unremedied, and may assign Default Points in respect of such unremedied Nonconformity pursuant to Section 5.4 [Assignment of Default Points] of Schedule 10.

6.4 Nonconformity Records

In addition to the maintenance of the Nonconformity Tracking System under Section 6.2 [Nonconformity Report Tracking System] of this Schedule, the Design-Builder shall maintain records of:

- (a) each Nonconformity;
- (b) the reference numbers of all Nonconformity Reports;
- (c) a description of all Nonconformity Reports;
- (d) the proposed actions by the Design-Builder to rectify each Nonconformity;
- (e) the date and time at which Nonconformities were identified;
- (f) the date and time at which the status of Nonconformity Report is changed to "pending" in accordance with Section 6.1(f) of this Schedule; and

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- (g) the date and time at which a Nonconformity specified in a Nonconformity Report was rectified.

**APPENDIX A
QUALITY MANUAL**

1.0 QUALITY MANUAL

- 1.1 The Design-Builder shall provide a comprehensive Quality Manual that describes the Quality Management System for all aspects of the Project Work including the Design and Construction phases of the Project, in accordance with the ISO 9001:2015 Standard. The Quality Manual shall establish the Quality Policy and Quality Objectives for all aspects of the Project Work and shall describe the processes that shall be established, implemented, controlled, and continually improved to achieve the established Quality Objectives.
- 1.2 The Quality Objectives shall be measurable, consistent with the Quality Policy and linked to meeting the needs and performance expectations of the Province with respect to all aspects of the Project Work, including the Design and Construction phases of the Project. The Quality Management System described in the Quality Manual shall include all the activities required to achieve these Quality Objectives, including project controls such as scope, cost, schedule, actions to address risks and opportunities, document control, and general management activities. All of these activities shall be subject to Internal Quality Audits and External Quality Audits.
- 1.3 The Quality Manual shall describe the nature of the Design-Builder's organization involved in performing the Project Work and how key management activities (such as project controls; Design; Construction; Traffic Management; communications, and environmental management) shall interface with each other. The Quality Manual shall also provide the organization chart, authority and responsibilities of all key personnel. The Quality Manual shall also show how the various levels of Quality Management System documentation, including other relevant documentation such as any plan, procedure or like document detailed elsewhere in this Agreement, are linked together.
- 1.4 The Quality Manual shall clearly define the reporting function and authority of the Design-Builder's Quality Director who shall liaise with the Province's Representative and act as the single point representative of the Design-Builder for all matters relating to quality management.

APPENDIX B
DESIGN QUALITY MANAGEMENT PLAN

1.0 DESIGN QUALITY MANAGEMENT PLAN

- 1.1 The Design-Builder shall provide a comprehensive Design Quality Management Plan that describes how it intends to manage the design processes for the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement.
- 1.2 The Design Quality Management Plan shall contain an organizational chart identifying key design management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces with other engineering groups, environmental management, and construction disciplines.
- 1.3 The Design Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) design input and output review;
 - (b) design verification to ensure that design input requirements have been met;
 - (c) design validation to ensure that the final product is capable of meeting its intended use;
 - (d) design changes;
 - (e) design subcontractor quality assessment and procurement;
 - (f) field reviews;
 - (g) interface with Construction, including the development and review of inspection and test plans by the Designer prior to and during Construction, and ongoing designer review of records during Construction;
 - (h) External Quality Audits of design subcontractor(s);
 - (i) Internal Quality Audits;
 - (j) control of nonconforming activities and/or product;
 - (k) Corrective Actions;
 - (l) Opportunities for Improvement;
 - (m) document management; and
 - (n) control of Records.

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Appendix B: Design Quality Management Plan

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The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Design Quality Management Plan, but the details of such processes in the applicable section of the Design Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to design quality management. Notwithstanding the foregoing, processes that fall within the specific requirements for Design must include detailed quality system procedures and process flow charts under the Design Quality Management Plan.

APPENDIX C
CONSTRUCTION QUALITY MANAGEMENT PLAN

1.0 CONSTRUCTION QUALITY MANAGEMENT PLAN

- 1.1 The Design-Builder shall provide a comprehensive Construction Quality Management Plan that describes how it intends to manage the Construction processes in connection with the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement.
- 1.2 The Construction Quality Management Plan shall contain an organizational chart identifying key Construction management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces with design and other disciplines such as communications, environmental management and Traffic Management.
- 1.3 The Construction Quality Management Plan shall, at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) construction safety audits;
 - (b) inspection, testing and monitoring;
 - (c) materials identification and traceability;
 - (d) chain of custody for sampling and testing;
 - (e) receiving inspections;
 - (f) Subcontractors' quality assessment and procurement;
 - (g) interface with design and other disciplines for work activities including the development and review of inspection and test plans prior to and during Construction, and coordination of field reviews during Construction;
 - (h) External Quality Audits of Subcontractors;
 - (i) Internal Quality Audits;
 - (j) control of nonconforming activities and/or product;
 - (k) Corrective Actions;
 - (l) Opportunities for Improvement;
 - (m) document management; and
 - (n) control of Records.

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The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Construction Quality Management Plan, but the details of such processes in the applicable section of the Construction Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to construction quality management. Notwithstanding the foregoing, processes that fall within the specific requirements for Construction must include detailed quality system procedures and process flow charts under the Construction Quality Management Plan.
- 1.5 The Construction Quality Management Plan shall include or reference an Inspection and Test Plan detailing all on and off Project Site inspection and test activities for work performed by the Design-Builder and that of its Subcontractors and suppliers of any tier. The Inspection and Test Plan shall, at a minimum, include:
 - (a) description of the inspection, test and monitoring activity;
 - (b) frequency of inspections, tests and monitoring;
 - (c) reference to standards, codes, specifications, and acceptance criteria;
 - (d) reports, documents, certificates and checklists required;
 - (e) personnel responsible for inspection, test and monitoring activity;
 - (f) quality assurance review, witness and hold points; and
 - (g) description and frequency of geotechnical instrumentation monitoring and adherence to acceptance criteria.
- 1.6 The Construction Quality Management Plan shall also identify all major work activities requiring detailed Work Method Statements. Work Method Statements shall describe the processes and methodologies required to deliver the Project Work. Work Method Statements shall be developed and in place prior to the commencement of the relevant work activity.

APPENDIX D
TRAFFIC QUALITY MANAGEMENT PLAN

1.0 TRAFFIC QUALITY MANAGEMENT PLAN

- 1.1 The Design-Builder shall provide a comprehensive Traffic Quality Management Plan that describes how it intends to administer the Traffic Management processes in connection with the Project in accordance with the ISO 9001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement. The Traffic Quality Management Plan shall address all phases of the Project Work including Design and Construction.
- 1.2 The Traffic Quality Management Plan shall contain an organizational chart identifying key Traffic Management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between Traffic Management and other disciplines such as Design, Construction, communications and environmental management.
- 1.3 The Traffic Quality Management Plan shall at a minimum, include or reference detailed quality system procedures and process flow charts for the following processes:
- (a) Traffic Control Plan design input and output review;
 - (b) Traffic Control Plan design verification to ensure that design input requirements have been met;
 - (c) Traffic Control Plan design validation to ensure that the final product is capable of meeting its intended use;
 - (d) Traffic Control Plan design changes;
 - (e) Subcontractors' quality assessment and procurement;
 - (f) External Quality Audits of Subcontractors;
 - (g) Internal Quality Audits;
 - (h) control of nonconforming activities and/or product;
 - (i) Corrective Actions;
 - (j) Opportunities for Improvement;
 - (k) document management; and
 - (l) control of Records.

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

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- 1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Traffic Quality Management Plan, but the details of such processes in the applicable section of the Traffic Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to traffic quality management. Notwithstanding the foregoing, processes that fall within the specific requirements of the Traffic Management Plan must include detailed quality system procedures and process flow charts under the Traffic Quality Management Plan.
- 1.5 The Traffic Management Auditing process and Site Condition Rating checklist as described in Section 4.8 [Traffic Management Auditing] of this Schedule shall be incorporated into the Traffic Quality Management Plan.

APPENDIX E
ENVIRONMENTAL QUALITY MANAGEMENT PLAN

1.0 ENVIRONMENTAL QUALITY MANAGEMENT PLAN

1.1 The Design-Builder shall provide a comprehensive Environmental Quality Management Plan that describes how it intends to manage the environmental components of the Project in accordance with the ISO 14001:2015 Standard, the Quality Management System requirements stated in its Quality Manual and the provisions of this Agreement. The Environmental Quality Management Plan shall address all phases of the Project Work including Design and Construction.

1.2 The Environmental Quality Management Plan shall contain an organizational chart identifying key environmental management personnel and the relationship with the Quality Director for the overall Quality Management System as documented in the Quality Manual. It shall also contain a description of the responsibilities, qualifications, and authority of the above personnel and the organizational interfaces between the environmental management and other disciplines such as design and construction.

1.3 The Environmental Quality Management Plan shall include or reference detailed quality system procedures and process flow charts for the following processes:

- (a) satisfying and ensuring compliance with the Design-Builder's Environmental Obligations, including the preparation and implementation of an Environmental Management Plan and specific plans as detailed elsewhere in this Agreement;
- (b) obtaining and maintaining Permits;
- (c) environmental monitoring and reporting;
- (d) environmental incident reporting and tracking;
- (e) External Quality Audits of Subcontractors;
- (f) Internal Quality Audits;
- (g) control of nonconforming activities and/or products;
- (h) Corrective Actions;
- (i) Opportunities for Improvement;
- (j) document management; and
- (k) control of Records.

The above procedures and flow charts shall document who does the work, what they do, and what evidence is generated that they have done the work correctly.

1.4 When any of the above processes are addressed as part of other Quality Documentation, such as the Quality Manual or another Quality Management Plan, these processes shall still be provided with their own section heading in the Environmental Quality Management Plan, but the details of

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such processes in the applicable section of the Environmental Quality Management Plan may be limited to a reference to the section or paragraph of the other applicable Quality Documentation where the relevant details are provided, provided that such referenced section or paragraph of such other Quality Documentation includes specific requirements to the applicable process as it relates to environmental quality management. Notwithstanding the foregoing, processes that fall within the specific requirements of environmental management must include detailed quality system procedures and process flow charts under the Environmental Quality Management Plan.

- 1.5 The Environmental Quality Management Plan shall clearly demonstrate how verification of the Design-Builder's compliance with the Design-Builder's Environmental Obligations, including obtaining approvals from relevant Environmental Authorities, will be carried out.

APPENDIX F

TRAFFIC MANAGEMENT SITE CONDITION RATING CHECKLIST– SAMPLE

Contractor		Location	
Auditor		Direction	
Date & Time		TCP #	
Weather		Activity	

A. Advanced Warning Area

- Signage
- Visibility
- Placement
- Condition

B. Transition Area, Buffer Space, Work Area, Termination Area

- Signage
- Visibility
- Placement
- Condition
- Delineation
- Placement
- Condition
- Spaced Correctly

C. Other issues

- Excavations
- Pedestrians from work
- Pedestrians from traffic
- Cyclists from work
- Cyclists from traffic
- Advance Warning area
- Transition area
- Buffer Space
- Work Area
- Warning lights
- Vehicles operating with traffic flow
- Vehicles parked with traffic flow
- Vehicles outside zone
- Entering/leaving with traffic flow
- Workers safety
- Traffic Control Plan available on site
- TCP or TCP Supervisor on site

• D. General Observations

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.....

SITE CONDITION RATING

Nonconformity		SCR Points	No. Of Occurrences	Total SCR Points
Signs	Missing (including side road)	5 for each sign		
	Incorrect Spacing	2 for each sign		
	Misaligned/Not visible	3 for each sign		
	Obstructed	3 for each sign		
	Condition marginal - needs repair	1 for each sign		
	Condition unacceptable - needs replacement	4 for each sign		
	Order incorrect	2 for each set of signs out of order		
	Contradictory sign not covered	2 for each sign		
	Unapproved sign	4 for each sign		
	Sign on wrong side	2 for each sign		
	Sign too low	1 for each sign		
	Speed restriction/de-restriction not appropriate/inconsistent	5 for each occasion		
	Speed limit not correctly aligned	2 for each occasion		
	Sign not upright	1 for each sign		
	Non-compliant support	2 for each support		
	Wrong sign	5 for each sign		
	Lateral location incorrect	1 for each sign		
Any other sign Deficiency	1 for each sign			
Delineation Devices	Missing as per TCP	30 where delineation is missing and required		
	Tapers too short	5 for each taper		
	Spacing in tapers	3 for each taper where spacing too great to be effective		
	Spacing in lanes	2 where spacing in lanes/around work area is too great		
	Condition marginal - needs repair	1 for each device where classified in marginal condition		
	Condition unacceptable - needs replacement	3 for each device in unacceptable condition		
	Using non-approved device	4 for each non-approved device		
	Used incorrectly	2 for each device		
	Lane Shift	10 for each missing or installed incorrectly		
	Any other delineation device deficiency	2 for each occurrence		
Pavement Markings	Marking missing	5 for each occurrence		
	Marking incorrect	5 for each occurrence		
	Marking not located as per TCP	5 for each occurrence		
	Marking not visible	5 for each occurrence		
	Contradictory markings/not eradicated	5 for each occurrence		
	Any other pavement marking deficiency	2 for each occurrence		
Miscellaneous	Workers working in Live Lanes	55 for each occasion		
	Traffic Control Personnel not located as per TCP	30 for each occurrence		
	Unauthorized/Unqualified person controlling traffic	30 for each occurrence		
	Flashing Beacon not used / ineffective	1 for each vehicle		
	PPE not worn	5 for each individual		
	PPE in poor condition	5 for each PPE in unacceptable condition		
	No provision for pedestrians	30 where no provision made and required		
	No provision for cyclists	30 where no provision made and required		
Parking/stopping features not relocated	5 where relocation of feature is required			

SCHEDULE 7: QUALITY MANAGEMENT

Appendix F: Traffic Management Site Condition Rating Checklist - Sample

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Nonconformity		SCR Points	No. Of Occurrences	Total SCR Points
	Equipment/materials obstruct pedestrians or cyclists	5 for each occurrence		
	Transition Area, or Buffer Space, or Work Area compromised	2 for unacceptable or no safety zone		
	Excavation not protected	10 for excavation not protected by acceptable method		
	DMS/PDMS message incorrect	20 for displaying incorrect information		
	Barrier defects	10 for each incorrect or missing barrier component		
	Any other hazards	10 for each occurrence		
Mobile & Semi Static Operations	Pilot vehicle omitted	20 for missing or incorrect location		
	Buffer/Shadow vehicle omitted	20 for missing or incorrect location		
	Vehicle mounted signs	5 for missing or incorrect signs		
	TMA missing	20 for TMA missing when required		
	TMA non-compliant	5 for TMA in use but not of acceptable standard		
	Arrowboard missing	20 for Arrowboard missing when required		
	Arrowboard display incorrect	20 for no display or incorrect display		
	Any other mobile & semi static deficiency	20 for each occurrence		
Other Operational	TBD			
SCR POINT TOTAL				

Site Condition Rating No Nonconformities Identified Category 1 Category 2 Category 3
 (0) (1 -25) (26-50) (51+)

Copies to:

Province's Representative

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LANDS**

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**PART 1
TERMS AFFECTING ACCESS TO PROJECT SITE**

1.1 Conditions of Access

The access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site] and the rights of the Design-Builder thereunder are subject to all terms, conditions and limitations set out in this Schedule (collectively, the “**Conditions of Access**”), including the following:

- (a) all rights of public passage or access existing over all or any part of the Project Site and the Project Infrastructure from time to time;
- (b) the rights of the public and users to use all or any part of the Project Facilities and any other private and public roads or highways;
- (c) the rights of access referred to in Section 4.6 [Public Use] and 4.7 [Access to Project Site and Project Infrastructure by Others];
- (d) the rights of the Province and any Governmental Authority with respect to the Project Site or parts thereof provided for elsewhere in this Agreement including Part 11 [Province’s Access, Monitoring and Step-In Rights];
- (e) in the case of any part of the Project Site that is Crown land, all rights over Crown land;
- (f) in the case of any part of the Project Site that is subject to the *Land Title Act* (British Columbia), any applicable exceptions to indefeasible title set out in section 23(2) thereof;
- (g) the terms and conditions of the Project Site Agreements, including the Railway Agreements, and of any Land Rights comprising any part or parts of the Project Site;
- (h) the Project Site Encumbrances and the Utility Agreements; and
- (i) all Indigenous Requirements and Requirements of Interested Parties.

1.2 Lands Not Yet Acquired

- (a) The Design-Builder acknowledges that as at the date of this Agreement neither the Province nor BCTFA owns all of the lands and Land Rights that will comprise the Project Lands, and that some of the lands that will comprise the Project Lands are to be acquired by the Province or BCTFA after the date hereof, after which they will be made available to the Design-Builder and will, for the purposes of this Agreement, form part of the Project Lands, all subject to the terms and conditions of this Agreement.
- (b) The Design-Builder will provide such information and documentation and such administrative assistance as may be requested by the Province and as the Design-Builder may reasonably be able to provide, to assist the Province or BCTFA in completing the acquisition in respect of any Project Lands. The Province shall reimburse the Design-Builder for the reasonable costs incurred by the Design-Builder in providing such information, documentation and assistance to the Province.

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1.3 Commencement of Access to Project Site

The access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for the Project Site] shall commence, and the Province shall make the relevant lands available to the Design-Builder for the purposes of this Agreement and the Project Work as follows:

- (a) in the case of Project Lands (or Land Rights therein) owned by or vested in the Province or BCTFA as of the Effective Date, on the Effective Date; and
- (b) without prejudice to the Province's obligations under Section 2.1 [Handover of Lands] of this Schedule and the Design-Builder's rights in respect of any breach thereof, in the case of any parcel of Project Lands (or Land Rights therein) not owned by or vested in the Province or BCTFA as of the Effective Date, on the date specified by the Province in a notice of entry with respect to such parcel, and if such date is before:
 - (i) the date that title to the parcel is acquired by and registered in the name of the Province or BCTFA, as the case may be; or
 - (ii) in the case of land established as a highway, the date that title to the parcel vests in the Province or BCTFA, as the case may be, as highway,

then until title to such parcel is registered in the name of the Province or BCTFA or vests in the Province or BCTFA, as the case may be, the Design-Builder shall comply with and cause all Subcontractors to comply with any terms governing such entry specified in the notice of entry.

The Province will use all reasonable efforts to provide that each parcel of Project Lands will, when made available to the Design-Builder in accordance with this Section 1.3, be a "highway" as defined by the *Transportation Act* (British Columbia).

1.4 Termination of Access to Project Site

The access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site] shall terminate and expire (except to the extent necessary to enable the Design-Builder to perform any obligations of the Design-Builder under this Agreement required to be performed in consequence of or following the termination of this Agreement) as follows:

- (a) as to any Temporary Land Rights, on the date of expiration or termination thereof as contemplated in Section 1.9 [Temporary Land Rights] of this Schedule;
- (b) as to any Land Rights (other than fee simple interests) in any Project Lands, on the date of termination thereof; and
- (c) as to all other Project Lands, on the Substantial Completion Date,

or, in each case, if earlier, the date on which the Province's rights of access to such part of the Project Site terminate as a result of any act or omission of, or breach in the performance or observance of, the Design-Builder's obligations under this Agreement by the Design-Builder or any person for whom the Design-Builder is in law responsible, and in any event, notwithstanding the foregoing, the access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site] shall

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terminate and expire (except to the extent necessary to enable the Design-Builder to perform any obligations of the Design-Builder under this Agreement required to be performed in consequence of or following the termination of this Agreement) not later than the effective date of any termination of this Agreement.

1.5 Limitations on Access to Project Site

In addition to and not in limitation of the other requirements in this Agreement, the following terms, conditions and limitations apply to the access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site]:

- (a) such access will subsist for the purposes of carrying out the Project Work and for no other purposes;
- (b) such access includes the right of the Design-Builder to grant access to the Project Site, on the same terms and conditions and subject to the same terms, conditions and limitations as the access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site], for the purpose of carrying out the Project Work and for no other purpose;
- (c) no legal demise or other interest in land, and no interest in the Project Site or the Project Infrastructure thereon, or in any other land or improvements, is granted to the Design-Builder, or created in favour of the Design-Builder, by this Agreement;
- (d) such access is non-exclusive, and no right to exclusive possession of all or any part of the Project Site or the Project Infrastructure thereon is granted to the Design-Builder; and
- (e) the Design-Builder's rights are derived from and subject to the rights and interests of the Province and/or BCTFA in and to the Project Site (including under the Project Site Agreements) and are subject to the Conditions of Access.

1.6 Special Use Restrictions

Without limiting the generality of Section 2.7 [Limited Use], or Section 1.5 [Limitations on Access to Project Site] of this Schedule, where any land or Land Rights forming part of the Project Site have been acquired or made available:

- (a) for any specific purpose pursuant to a Project Site Agreement, or a Compulsory Acquisition Order; or
- (b) subject to any restriction relating to the use of such land for any specific purpose;

the Design-Builder shall not use such land or Land Rights other than for activities that are necessary for the achievement of such specific purpose, and the access to the Project Site granted to the Design-Builder in Section 2.5 [Access to and Responsibility for Project Site] in respect of such land will be limited accordingly.

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1.7 Boundaries Descriptions

Subject to Section 1.9 [Updating of Land Boundaries], the boundaries of the Project Lands are as reflected in the descriptions thereof in the Appendices to this Schedule and the Land Identification Drawings. The Land Identification Drawings, as updated in accordance with Section 1.9 [Updating of Land Boundaries] shall govern as to the delineation of the boundaries of the Project Lands. The Land Identification Sheets are for convenience of reference only and shall not determine or affect the rights and obligations of the parties. The Design-Builder confirms that it is satisfied as to the adequacy and sufficiency of the descriptions of such boundaries for the purposes of the design of the New Project Infrastructure pursuant to the Project Requirements on the date of execution of this Agreement.

1.8 Temporary Land Rights

- (a) Until such time as the Province gives the Design-Builder notice of the expiry of any Temporary Land Rights, and which notice shall not, unless otherwise specified on the Land Identification Drawings, take effect prior to the Substantial Completion Date, the lands associated with such Temporary Land Rights shall form part of the Project Lands for all purposes of this Agreement.
- (b) Upon the expiry of the Temporary Land Rights in respect of any lands included in the application to support the ALC Resolution, the Design-Builder shall return such lands in a manner suitable for agricultural use and in compliance with all other applicable requirements of the ALC Resolution.

1.9 Updating of Land Boundaries

The descriptions of the boundaries of the Project Lands in the Appendices to this Schedule and the Land Identification Drawings, will be revised as appropriate to reflect:

- (a) the actual boundaries of the Project Lands that are acquired by the Province or BCTFA after the Effective Date;
- (b) any additional Land Rights actually acquired in connection with any Province Change or agreed Value Engineering Proposal; and
- (c) any revisions to the boundaries of the Project Lands necessary to reflect the expiry of Temporary Land Rights in accordance with Section 1.8 [Temporary Land Rights] of this Schedule,

and provided that no such revision of the boundaries of the Project Lands shall constitute a Change or a Compensation Event pursuant to subsection (a) of the definition of "Compensation Event" in Section 1.1 [Definitions] of Schedule 1. The Design-Builder shall submit to the Province's Representative pursuant to the Consent Procedure the Land Identification Drawings, updated in accordance with the foregoing upon the request of the Province.

1.10 Access to and from Project Site

The Province shall at all reasonable times during the Term make available to the Design-Builder reasonable access to and from the Project Site by means of right of passage across highways outside the Project Site for which the Province or BCTFA is the highway authority, but only to the extent necessary

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to enable the Design-Builder to perform its obligations under this Agreement, subject to reasonable prior notice in writing being given by the Design-Builder to the Province's Representative, and subject to all Laws including Laws applicable to the use of highways by the public generally. The Design-Builder, in exercising such access, shall use all reasonable efforts to avoid or, if unavoidable, to minimize physical disruption to the operation of such highways and shall not cause any physical damage to such highways. The Province shall not be responsible for obtaining such access across any highway or road under the authority of a municipality or any highway authority other than the Province or BCTFA.

1.11 Design-Builder Not to Acquire Project Lands

Neither the Design-Builder nor any Partner, nor any Subcontractor who contracts directly with the Design-Builder to perform all or part of the Project Work, nor any Affiliate of the Design-Builder or any Partner, or of a Subcontractor who contracts directly with the Design-Builder to perform all or part of the Project Work, shall, except from the Province as expressly provided in this Agreement, acquire any Project Lands or any Land Rights in Project Lands, without the prior written consent of the Province pursuant to the Consent Procedure, which consent may be withheld in the discretion of the Province.

1.12 Acquisition of Additional Project Lands by the Province

The Design-Builder may submit a Value Engineering Proposal in accordance with Section 7.4 [Value Engineering Proposals] and Part 3 [Value Engineering Proposals] of Schedule 11 requesting the Province and/or BCTFA to acquire Land Rights in, over or relating to lands that do not currently form part of the Project Lands, if the Design-Builder considers that it would be beneficial to construct or install Project Infrastructure on such lands.

PART 2 HANDOVER OF LANDS

2.1 Handover of Lands

The Province shall make each parcel of Project Lands available to the Design-Builder on the terms of this Agreement on or before the Specified Handover Date for that parcel of Project Lands.

2.2 Extension of Specified Handover Date by Province

The Province will have the right from time to time to extend the Specified Handover Date with respect to any parcel of Project Lands by way of an Province Change and the provisions of Part 7 [Province Changes and Design-Builder Proposals] will apply accordingly.

2.3 Change of Handover Date by Design-Builder

The Design-Builder may from time to time request a change in any Specified Handover Date with respect to any parcel of Project Lands, provided the Design-Builder makes such request by notice in writing to the Province's Representative prior to the then current Specified Handover Date for such parcel, and the Province, to the extent it is reasonably able to do so, will endeavour to accommodate such request, provided that the Design-Builder will bear and will reimburse the Province and BCTFA on demand for, and will indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, in respect of, all Direct Losses and/or Claims at any time suffered or incurred by the Province and the Province Indemnified Persons, or any of them, as a result of accommodating or attempting to accommodate such request, and provided further that neither the Province nor BCTFA will

- 6 -

have any liability to the Design-Builder for, and the Design-Builder will have no claim for compensation or other relief arising out of, any failure of the Province or BCTFA to accommodate any such request.

**PART 3
OTHER LAND**

3.1 Acquisition of Other Land

- (a) It is the Design-Builder's obligation, at its sole cost and expense, to acquire any access to or use of, or any Land Rights in respect of, any Other Land, desired by the Design-Builder, or required, to enable the Design-Builder to perform its obligations under this Agreement.
- (b) The Design-Builder shall bear and be responsible for all costs, charges and expenses, and all other Losses and Claims, arising from or in connection with the use or occupation of any Other Land or Land Rights in Other Land acquired or used for the purposes of performing the obligations of the Design-Builder under this Agreement.
- (c) The Design-Builder shall indemnify and hold harmless the Province and the Province Indemnified Persons, and each of them, from and against all Claims and Direct Losses arising as a result of or in connection with the acquisition, use or occupation of any Other Land or Land Rights in Other Land acquired or used for the purposes of performing the obligations of the Design-Builder under this Agreement.
- (d) Before acquiring any access to or use of, or any Land Rights in respect of, any Other Land, for the purposes of performing the obligations of the Design-Builder under this Agreement, and before using or allowing the use of any Other Land for such purposes, the Design-Builder shall provide to the Province evidence satisfactory to the Province that such acquisition and use for such purposes will not require an amendment to the OEEA or the Environmental Assessment Certificate or an application for a new assessment or certificate under any Environmental Laws.
- (e) At the Province's direction the Design-Builder shall ensure that, if this Agreement is terminated prior to the Total Completion Date, any Other Lands or Land Rights in respect of Other Lands acquired by (or on behalf of) the Design-Builder or any person for whom the Design-Builder is in law responsible, and occupied at the time of such termination by the Design-Builder for the purposes of the Project, are made available to the Province for its occupation and use until the completion of the Project by the Province or, if applicable, until such earlier date on which the Design-Builder's rights over such land would have otherwise expired for the purposes of the Project (or, in each case, such earlier date as determined by the Province, in its discretion) upon such terms as the Province may in its discretion require, subject to payment by the Province of a reasonable rental charge, and if the Province exercises its rights under this Section 3.1(e), the Design-Builder shall indemnify the Province and the Province Indemnified Persons, and each of them, from and against any Claims and Direct Losses at any time suffered or incurred by, or brought or made against, the Province and the Province Indemnified Persons that arise directly or indirectly as a result of or in connection with:
 - (i) any failure by any person for whom the Design-Builder is in law responsible failing to comply or fulfill any obligation in any lease or other agreement which

- 7 -

permits use and occupation of such Other Lands or Land Rights in respect of Other Lands; or

- (ii) the use and occupation of the relevant Other Lands or Land Rights in respect of Other Lands during the period prior to occupation and use thereof by the Province,

and the provisions of this Section 3.1(e) shall survive the termination of this Agreement.

PART 4 SPECIAL PROVISIONS

4.1 Site Materials

The Design-Builder may only excavate, extract, dispose of, exploit or otherwise deal with Site Materials:

- (a) in accordance with applicable Laws, Permits, and the terms of all relevant Project Site Agreements, Compulsory Acquisition Orders, Project Site Encumbrances and Utility Agreements;
- (b) if and to the extent that, in the case of excavation or extraction of Site Materials, such excavation or extraction is necessary for the purpose of carrying out the Project Work in accordance with the Project Requirements;
- (c) subject to and in accordance with the rights of all third parties, whether being rights in or to the Site Materials, Land Rights, rights under Project Site Agreements, Project Site Encumbrances, Utility Agreements, Indigenous Requirements, Requirements of Interested Parties, or otherwise;
- (d) subject to all limitations, restrictions and conditions, whether pursuant to Laws or otherwise, that would apply to or affect the right of the Province or BCTFA to undertake any such excavation, extraction, disposal, exploitation or other dealing if the Province or BCTFA were undertaking the same;
- (e) in a manner that does not contravene the OEEA or the Environmental Assessment Certificate or the representations or undertakings made or given in the application to obtain the Environmental Assessment Certificate, and in accordance with all applicable Permits including those obtained by the Design-Builder to permit such excavation, extraction, disposal of, exploitation or dealing with the Site Materials; and
- (f) in accordance with the requirements in, and in a manner that does not contravene, the ALC Resolution or the representations or undertakings made or given in the application to obtain the ALC Resolution.

4.2 Fire Control Powers Under the *Wildfire Act*

For greater certainty, the exercise by the Province of rights, powers or authorities provided for under any enactment to compel the provision of facilities, equipment and/or employees to carry out fire control under the *Wildfire Act* (British Columbia) will not give rise to any Claim or entitlement on the

- 8 -

part of the Design-Builder for any Losses, compensation, extension of time or other relief under this Agreement.

4.3 Cutting of Trees or Logging

- (a) The Design-Builder will not cut down or remove trees or timber grown on or make any use of forested lands comprised in the Project Site except in accordance with all applicable Laws and Permits, the OEEA, the Environmental Assessment Certificate and, in the case of cutting or removal of trees or timber, where:
 - (i) the Design-Builder, acting reasonably, determines that certain trees must be removed for bona fide construction or safety reasons or in order to comply with any of its other obligations under this Agreement; or
 - (ii) the prior approval of the Province (in the case of trees or timber on Crown land) or BCTFA (in the case of trees or timber on land owned by BCTFA) is obtained.
- (b) The Design-Builder will pay all costs and be responsible for all Claims and Direct Losses arising from or in connection with the cutting or removal of trees or timber, and will obtain at its expense all required Permits in connection therewith.
- (c) The Design-Builder will not sell or otherwise dispose of or deal with any trees or timber cut or removed from the Project Site except subject to and in accordance with directions received from the Province (in the case of trees or timber on Crown land) or BCTFA (in the case of trees or timber on land owned by BCTFA) and, if applicable, in accordance with the *Forest Act* (British Columbia).

PART 5 LAND RIGHTS AND ENCUMBRANCES

5.1 Performance of Agreements

The Design-Builder shall:

- (a) observe and perform in all material respects the obligations of the Province and BCTFA under all Project Site Agreements except:
 - (i) those obligations with respect to which the Design-Builder is relieved from liability under Section 5.3 [Exceptions to the Design-Builder Responsibilities] of this Schedule to the extent so relieved; and
 - (ii) those obligations of the Province and BCTFA under the Project Site Agreements that may only be legally observed and performed by the Province or BCTFA as a Governmental Authority;
- (b) not do or omit to do, and not cause or permit to be done or omitted by any Subcontractor or other person for whom the Design-Builder is in law responsible, anything on or with respect to the Project Site or any part thereof or any improvements thereon that would cause the Province or BCTFA to be in breach under any of the Project Site Agreements, Project Site Encumbrances, Utility Agreements, Indigenous Requirements, Requirements

- 9 -

of Interested Parties and Permits, but the Design-Builder shall not pursuant to this Section 5.1(b) be obligated to perform those obligations with respect to which the Design-Builder is relieved from liability under Section 5.3 [Exceptions to the Design-Builder Responsibilities] of this Schedule to the extent so relieved; and

- (c) observe and comply with the terms and conditions of all Land Rights relating to or benefiting the Project Site or any part thereof, except:
 - (i) those obligations with respect to which the Design-Builder is relieved from liability under Section 5.3 [Exceptions to the Design-Builder Responsibilities] of this Schedule to the extent so relieved; and
 - (ii) those terms and conditions of such Land Rights that may only be legally observed and performed by the Province or BCTFA as a Governmental Authority.

5.2 Project Work to Comply

The Design-Builder will perform the Project Work such that:

- (a) the Design-Builder complies with and performs all obligations under all of the Project Site Agreements, Project Site Encumbrances, Utility Agreements, Indigenous Requirements, Requirements of Interested Parties and Permits as if the Design-Builder were a party to or bound by such agreements, orders, requirements and permits in the place of the Province or BCTFA, as applicable, except for those obligations with respect to which the Design-Builder is relieved from liability under Section 5.3 [Exceptions to the Design-Builder Responsibilities] of this Schedule to the extent so relieved;
- (b) all Project Work is performed in a manner that does not breach any of the provisions of the Project Site Agreements, Project Site Encumbrances, Utility Agreements, Indigenous Requirements, Requirements of Interested Parties and Permits; and
- (c) there will be no act or omission to act by the Design-Builder or any of the Subcontractors or other persons for whom the Design-Builder is in law responsible that gives rise to a right for any person to obtain any Land Rights in the Project Site or the Project Infrastructure or any part thereof.

5.3 Exceptions to Design-Builder Responsibilities

The Design-Builder shall not have any obligation to pay any rent, user fees, property taxes (if any) or occupancy costs that are or become payable by the Province or BCTFA under Project Site Agreements or Project Site Encumbrances or to indemnify third parties in respect of the non-payment thereof, except for any rent, user fees, property taxes or occupancy costs that become payable as a direct result of a failure by the Design-Builder to observe or perform:

- (a) any other obligations of the Province or BCTFA under the Project Site Agreements that are the responsibility of the Design-Builder; or
- (b) any obligations of the Design-Builder under this Agreement.

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5.4 Additional Agreements

The Province and BCTFA each has the right from time to time, in accordance with Section 5.5 [Additions or Changes by Province Change] of this Schedule, to obtain, enter into, assume or grant, additional or amended Project Site Agreements, Compulsory Acquisition Orders and Project Site Encumbrances, and the obligations of the Design-Builder under this Agreement with respect to Project Site Agreements, Compulsory Acquisitions Orders and Project Site Encumbrances shall apply to such agreements, orders and encumbrances.

5.5 Additions or Changes by Province Change

The Province shall issue an Province Change, and the provisions of Part 7 [Province Changes and Design-Builder Proposals] will apply, in the case of any additional or amended Project Site Agreements, Compulsory Acquisition Orders and Project Site Encumbrances obtained, entered into, assumed or granted by the Province or BCTFA after the Financial Submittal Date, except in the case of:

- (a) additional or amended Project Site Agreements, Compulsory Acquisition Orders and Project Site Encumbrances obtained, entered into, assumed or granted in respect of Project Lands or Land Rights therein as specified in Appendix A [Project Lands] to this Schedule, for the purposes of or in connection with the Province acquiring and making available to the Design-Builder such Project Lands and Land Rights as contemplated by this Agreement;
- (b) any additional or amended Encumbrance contemplated in Appendix B [Certain Project Site Encumbrances] or otherwise entered into, assumed or granted in respect of Project Lands to facilitate the Project Work; or
- (c) any permit referred to in subsection (d) of the definition of Project Site Encumbrances in Section 1.1 [Definitions] of Schedule 1,

provided that the Province shall give the Design-Builder prompt written notice of any such matters.

5.6 Provision of Assistance by Design-Builder

The Design-Builder at its expense shall provide such information, documentation and administrative assistance as may be requested by the Province or BCTFA and as the Design-Builder may reasonably be able to provide (and, if requested, shall execute such applications as are required to be in its name) to enable the Province or BCTFA:

- (a) to apply for, obtain and (where applicable) renew or extend any Project Site Agreements, including any railway crossing agreements, and Utility Agreements; and
- (b) to comply with and demonstrate compliance with, requirements and obligations of the Province or BCTFA under any Project Site Agreements, Project Site Encumbrances, Utility Agreements, Indigenous Requirements, Requirements of Interested Parties and Permits.

- 11 -

5.7 No Encumbrances by Design-Builder

Except with the prior written consent of the Province, which consent may be granted or withheld in the discretion of the Province, the Design-Builder shall not:

- (a) grant, create, incur or, to the extent within its control to prevent the same, permit, any Encumbrance upon, affecting or against all or any part of the Project Site or the Project Infrastructure;
- (b) grant, create, incur or permit any Encumbrance upon, affecting or against any Plant title to which has passed to the Province in accordance with Section 2.12 [Transfer of Title]; or
- (c) do or omit to do, or cause, suffer or permit to be done or omitted by any person for whom the Design-Builder is in law responsible, anything that results or could result in any Encumbrance upon, against or affecting all or any part of the Project Site or the Project Infrastructure or any Plant title to which has passed to the Province in accordance with Section 2.12 [Transfer of Title].

If all or any part of the Project Site or the Project Infrastructure, or any Plant title to which has passed to the Province in accordance with Section 2.10 [Title to Improvements] or Section 2.12 [Transfer of Title], becomes subject to any Encumbrance that has not been consented to or granted by the Province, other than an Encumbrance resulting from any act or omission of the Province or BCTFA, the Design-Builder will immediately take all necessary steps to remove such Encumbrance. Subject to Section 5.9 [Removal of Liens] of this Schedule, if the Design-Builder fails to remove any such Encumbrance within 15 days (or such longer period as may reasonably be required in the circumstances provided the Design-Builder is proceeding with all due diligence to remove the same) of its coming into existence then, without prejudice to any other rights or remedies the Province may have, the Province will be at liberty to take whatever steps it or they deem necessary and appropriate to remove the Encumbrance, including payment of any amount owing or claimed thereunder, and to seek immediate recovery of the amount of any such payment and any associated costs, including legal costs on a solicitor own client basis, from the Design-Builder. The Design-Builder will on demand reimburse all such payments and costs to the Province.

5.8 Notice of Liens

The Design-Builder will notify the Province's Representative of all builders' liens and other liens and claims of lien for labour, services or materials furnished or alleged to have been furnished with respect to the Project Work that are registered against or otherwise affect the Project Site or the Project Infrastructure or any part thereof, promptly after the Design-Builder becomes aware thereof.

5.9 Removal of Adverse Claims

- (a) Without limiting the generality of Section 5.7 [No Encumbrances by Design-Builder] of this Schedule or any of the Design-Builder's other obligations under this Agreement, the Design-Builder will cause all builders' liens and other liens and claims of lien for labour, services or materials furnished or alleged to have been furnished with respect to the Project Work (collectively, "**Adverse Claims**") that are registered against or otherwise affect the Project Site or the Project Infrastructure or any part thereof to be paid, satisfied, released and vacated and, if registered, to be discharged from title, within 30 days (or such longer period as may reasonably be required in the circumstances provided the

- 12 -

Design-Builder is proceeding with all due diligence) following the date on which the Design-Builder becomes aware thereof.

- (b) If the Design-Builder fails to discharge any Adverse Claim as required pursuant to Section 5.9(a) of this Schedule, the Province may, but without any obligation to do so, cause the Adverse Claim to be vacated or removed and discharged from title by the payment of money into a Court of competent jurisdiction or the posting of security with the Court, the Design-Builder will, on demand, reimburse the Province all amounts so paid or attributable to or drawn under the security so posted together with all related costs (including legal costs on a solicitor own client basis) and expenses incurred by the Province.
- (c) If the Design-Builder *bona fide* disputes any Adverse Claim, the Design-Builder shall be entitled to defend against the Adverse Claim in any proceedings if the Design-Builder first:
 - (i) pays into Court, or provides to the Court sufficient security for, the amount claimed and costs as the Court may direct, and obtains a Court order for the discharge of such Adverse Claim as registered against or otherwise affecting or pertaining to the Project Site or Project Infrastructure or any part thereof, and registers any such discharge in the Land Title Office to discharge any such Adverse Claim from title to the Project Site or any part thereof; or
 - (ii) provides to the Province such other security or remedies in favour of the Province in respect of such Adverse Claim as the Province may determine in its discretion.

5.10 Compliance with *Builders Lien Act* and Payments to Subcontractors

- (a) The Design-Builder will comply with and cause all of its Subcontractors of any tier to comply with any applicable provisions of the *Builders Lien Act* (British Columbia) with respect to Project Work carried out on and materials supplied to or in respect of the Project Site and the Project Infrastructure and will provide evidence of such compliance to the Province upon request.
- (b) Without limiting any of its other rights or obligations under this Agreement, the other Province Project Documents or any Laws, the Design-Builder shall pay or provide for the payment when due, and shall ensure that all of the Subcontractors pay or provide for the payment when due, of all accounts in connection with the performance of the Project Work (including all accounts for the supply of labour, materials and services in connection with any works carried out in the course of the Project Work).
- (c) The Design-Builder shall provide to the Province's Representative a monthly certificate addressed to the Province and certified by the Design-Builder's Representative certifying that all wages, salaries and other amounts due to its employees and Subcontractors have been paid in full up to the last payment, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and, if applicable, the *Builders Lien Act* (British Columbia). If the Design-Builder is unable to obtain from any Subcontractor a representation, warranty or covenant sufficient to enable the Design-Builder to provide such monthly certificate to the Province's Representative, the Design-

- 13 -

Builder shall provide the Province's Representative with full particulars of any matter which precludes the Design-Builder from providing such certificate to the Province's Representative.

**APPENDIX A
PROJECT LANDS**

1. Each parcel of Project Lands is or will be held by the Province or BCTFA in fee simple except where a Land Interest other than a fee simple interest or highway is specified for that parcel in Table A.
2. Each parcel of Project Lands has, as its Specified Handover Date, the Effective Date, except where another Specified Handover Date is specified for that parcel in Table A.
3. Table A – Project Lands Exceptions

	Description of Land	Land Rights if other than a Fee Simple Interest or Highway	Specified Handover Date if other than Effective Date
	Insert parcel/lot descriptions by legal descriptions, LTO Parcel Identification Numbers, plans, or any combination, sufficient to identify the land.	Insert a description of the Land Rights such as a statutory right of way, lease, license or permit, including rail crossing agreements, orders or permits.	Specify date.
1.	Portion of PID #000-915-254 shaded in yellow on Land Identification Drawings (for convenience of reference only see Sheet H-1401RW and H1402RW)	Temporary licence for construction access for drainage related works	January 1, 2020
2.	Portion of PID#011-239-662 shaded in blue on Land Identification Drawings (for convenience of reference only see Sheet H-1401RW and H1403RW)	SRW for drainage works	May 31, 2020
3.	Portion of PID#011-239-697 shaded in blue on Land Identification Drawings (for convenience of reference only see Sheet H1403RW)	SRW for drainage works	May 31, 2020
4.	Portion of PID#028-675-053 shaded in blue on Land Identification Drawings (for convenience of reference only see Sheet H1403RW)	SRW for drainage works	May 31, 2020
5.	Portion of PID#000-915-025 shaded in blue on Land Identification Drawings for SRW and yellow for highway (for convenience of reference only see Sheet H-1401RW and H1403RW)	SRW for drainage works and highway	May 31, 2020

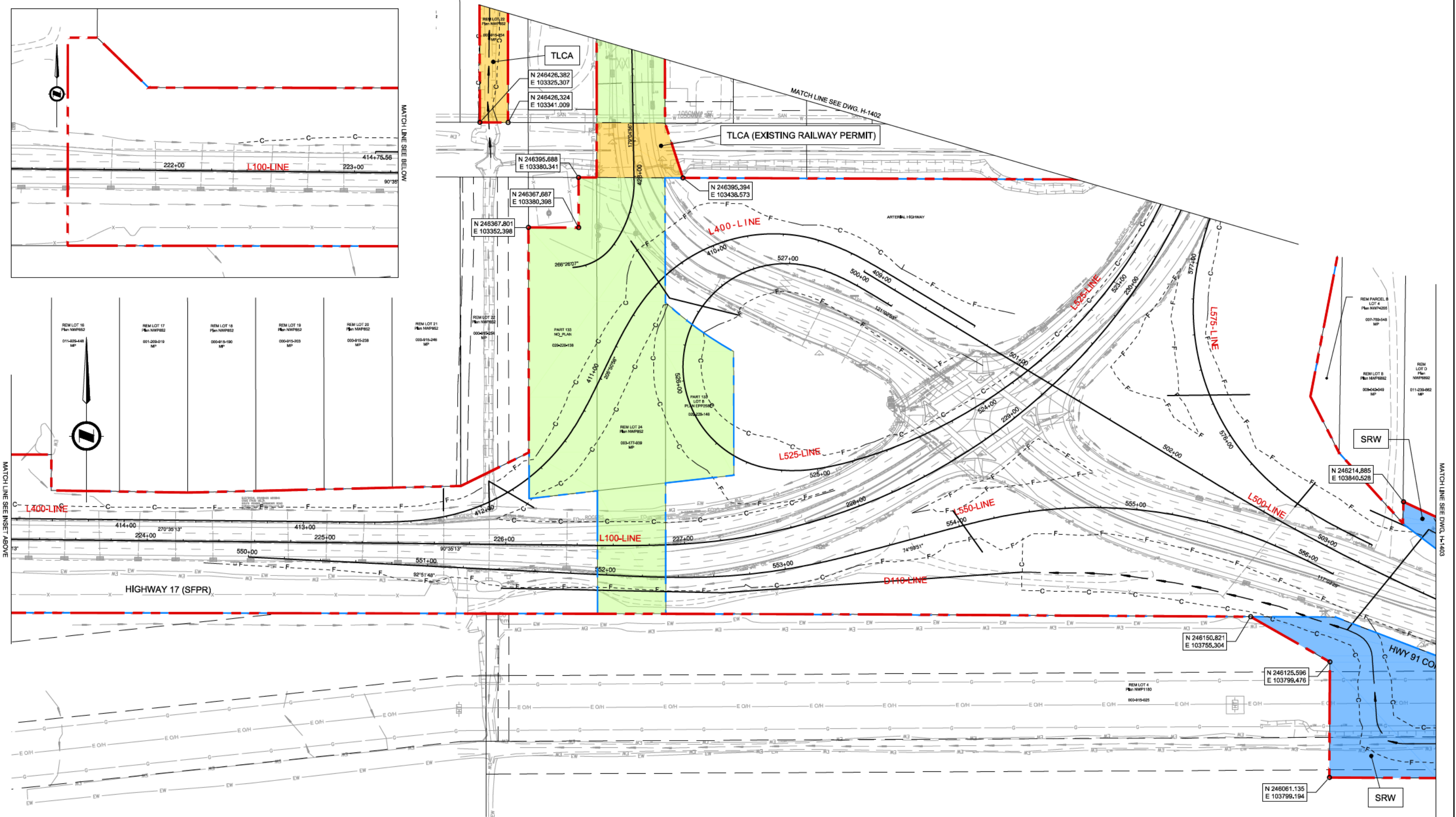
APPENDIX B
CERTAIN PROJECT SITE ENCUMBRANCES

1. Environmental Assessment Certificate
2. ALC Resolution

**APPENDIX C
LAND IDENTIFICATION DRAWINGS**

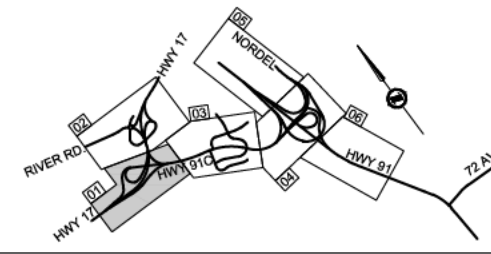
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LEGEND:

- - - PROJECT LIMITS
- - - EXISTING ARTERIAL RIGHT OF WAY
- NEW RIGHT OF WAY REQUIRED
- NEW STATUTORY RIGHT OF WAY
- ESTIMATED TEMPORARY LICENSE FOR CONSTRUCTION ACCESS (TO BE CONFIRMED)
- MINISTRY LEASEBACK (CITY OF DELTA)



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REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA

MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE

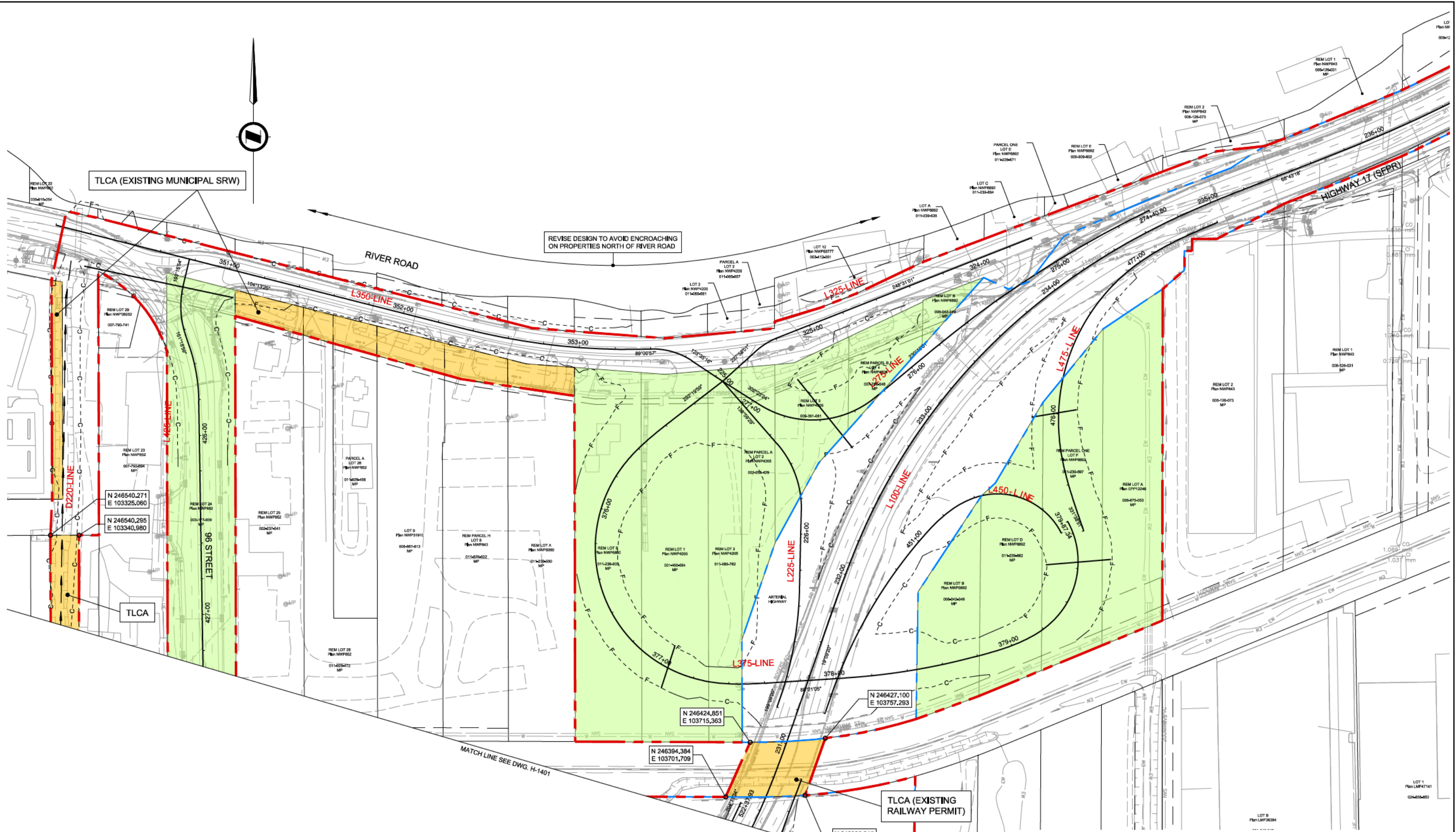
HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT

DESIGNED _____ DATE _____ QUALITY ASSURANCE _____ DATE _____
 QUALITY CONTROL _____ DATE _____ DRAWN _____ DATE _____

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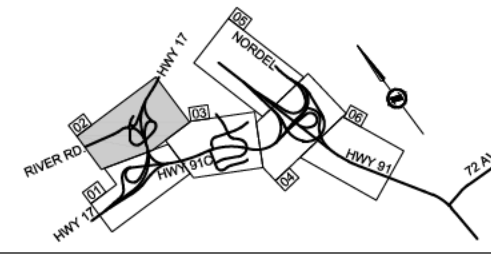
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LEGEND:

- - - PROJECT LIMITS
- - - EXISTING ARTERIAL RIGHT OF WAY
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- NEW STATUTORY RIGHT OF WAY
- ESTIMATED TEMPORARY LICENSE FOR CONSTRUCTION ACCESS (TO BE CONFIRMED)
- MINISTRY LEASEBACK (CITY OF DELTA)



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REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
 MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
 HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT

DESIGNED _____ DATE _____ QUALITY ASSURANCE _____ DATE _____
 QUALITY CONTROL _____ DATE _____ DRAWN _____ DATE _____

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LAND IDENTIFICATION DRAWING
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 REFERENCE CONCEPT 3.0

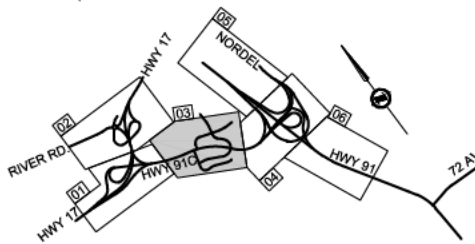
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LEGEND:

	PROJECT LIMITS
	EXISTING ARTERIAL RIGHT OF WAY
	NEW RIGHT OF WAY REQUIRED
	NEW STATUTORY RIGHT OF WAY
	ESTIMATED TEMPORARY LICENSE FOR CONSTRUCTION ACCESS (TO BE CONFIRMED)
	MINISTRY LEASEBACK (CITY OF DELTA)



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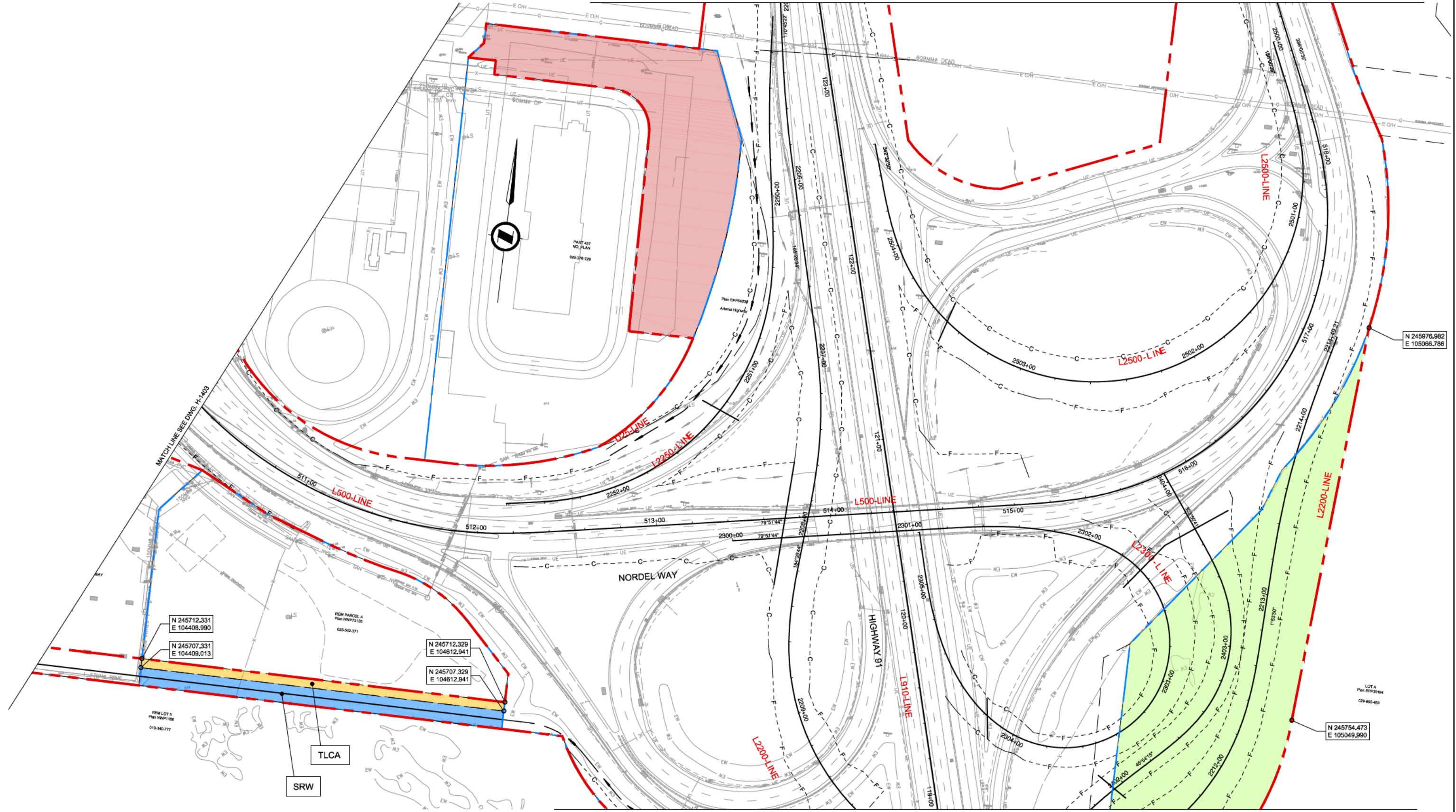
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 MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
 HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT

DESIGNED _____ DATE _____ QUALITY ASSURANCE _____ DATE _____
 QUALITY CONTROL _____ DATE _____ DRAWN _____ DATE _____

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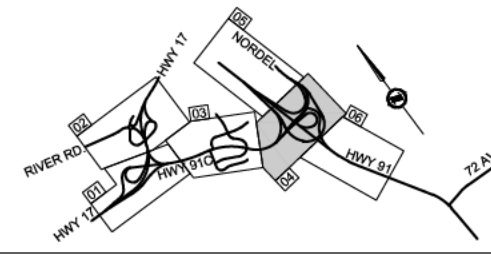
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LEGEND:

- PROJECT LIMITS
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MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT

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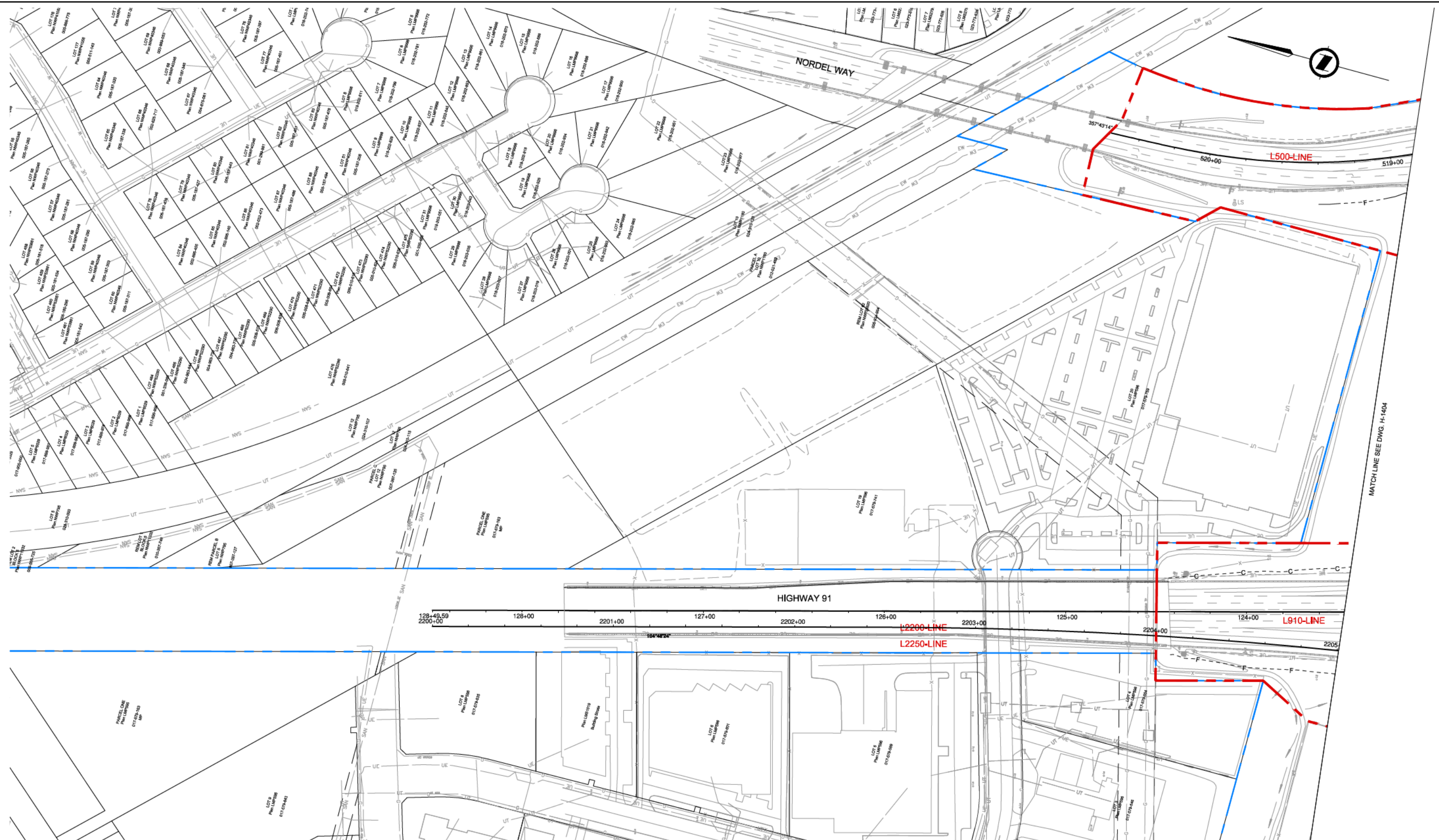
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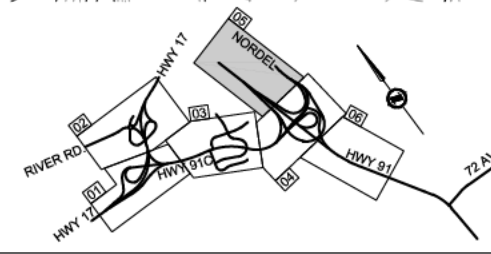
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	NEW STATUTORY RIGHT OF WAY
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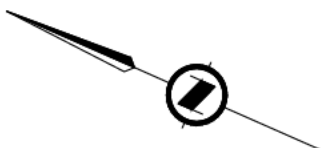
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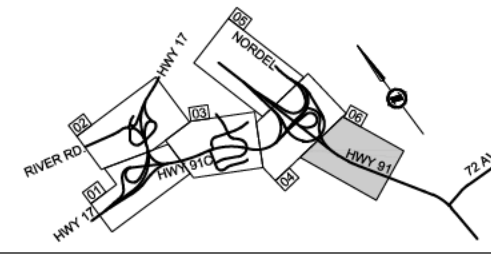
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FILE NUMBER	PROJECT NUMBER	REV	DRAWING NUMBER	REV	
16-0982	08900	1	H-1405		



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LEGEND:

	PROJECT LIMITS
	EXISTING ARTERIAL RIGHT OF WAY
	NEW RIGHT OF WAY REQUIRED
	NEW STATUTORY RIGHT OF WAY
	ESTIMATED TEMPORARY LICENSE FOR CONSTRUCTION ACCESS (TO BE CONFIRMED)
	MINISTRY LEASEBACK (CITY OF DELTA)



SCALE 0 10 1:1000 50m CAD FILENAME 16-0982-PROPERTY PLANS.DWG DATE 2016-11-15

REV	DATE	REVISIONS	SIGNATURE

BRITISH COLUMBIA
 MINISTRY OF TRANSPORTATION AND INFRASTRUCTURE
 HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT

DESIGNED _____ DATE _____ QUALITY ASSURANCE _____ DATE _____
 QUALITY CONTROL _____ DATE _____ DRAWN _____ DATE _____

DRAFT - FOR INFORMATION ONLY

LAND IDENTIFICATION DRAWING				
HIGHWAY 91/17 AND DELTAPORT WAY UPGRADE PROJECT				
REFERENCE CONCEPT 3.0				
FILE NUMBER	PROJECT NUMBER	REG	DRAWING NUMBER	REV
16-0982	08900	1	H-1406	

**SCHEDULE 9
COMMUNICATIONS AND ENGAGEMENT**

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**PART 1
GENERAL PROVISIONS**

1.1 Communications and Engagement Reference Documents

The Design-Builder's Communication and Engagement activities shall comply with the following Reference Documents:

- (a) the Project Communications and Engagement Plan.

1.2 Communications and Engagement Scope

Communications and Engagement refers to the following general activities as described in more detail throughout this Schedule:

- (a) Construction notification;
- (b) Community and Stakeholder Engagement;
- (c) Enquiry-Response management;
- (d) supporting the Province with crisis communications and issues management; and
- (e) supporting the Province with media and government relations.

1.3 Communications and Engagement Objectives

The Design-Builder acknowledges that the desired outcome of all the Communications and Engagement activities is to involve and inform the general public and Stakeholders concerning the value, benefits and progress of the Project and to minimize public impacts by considering the needs of the public and appropriately responding to questions and concerns about Construction. The Design-Builder shall commit to working closely, collaboratively and in a timely manner with the Province to communicate and engage regularly and effectively with the public. The Design-Builder shall be responsible for achieving the following Communications and Engagement objectives:

- (a) build and maintain positive relationships with Stakeholders, road users, local residents and businesses, adjacent property owners and the public;
- (b) increase general public understanding of the Project goals and the status of Construction;
- (c) provide regular and timely updates from the Effective Date until the Total Completion Date in order to support the Province's communications about Construction progress;
- (d) develop and implement a Traffic Communication Plan and provide a comprehensive traffic communications program for the duration of the Project Work;
- (e) support the overall Traffic Management requirements, including minimizing disruption and maximizing predictability, with timely and proactive notification of traffic events, including access, wayfinding, traffic changes, detours or delays, and impacts on local business operations, to minimize traffic related complaints;

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- (f) ensure timely communication of business access changes and related issues to the Province's Representative for issues management purposes;
- (g) meet all requirements of Environmental Authorities in connection with the Project, including all requirements of the OEEA and Schedule 6 [Environmental Obligations] and the relevant requirements of the Environmental Assessment Certificate and the Table of Commitments;
- (h) consider and respond appropriately to general public, community and Stakeholder enquiries, comments and complaints in relation to the Project, including with respect to noise, dust, vibration, traffic impacts, construction schedule and staging and impacts to local residents and local businesses' operations;
- (i) support the Province's media and government relations and crisis communications efforts with timely information and availability of key personnel; and
- (j) demonstrate accountability in effectively delivering Communications and Engagement activities.

1.4 Planning and Reporting Requirements in Addition

For clarity, any planning and reporting requirements in this Schedule are separate and distinct from and in addition to and do not limit the Design-Builder's obligation to submit plans and reports to the Province under this Agreement, including Schedule 6 [Environmental Obligations] and Schedule 7 [Quality Management].

1.5 Technological Improvements

The Design-Builder shall monitor and keep up-to-date on all technological developments and other improvements that may have a beneficial effect on Communications and Engagement for the Project or improve the Design-Builder's ability to give effect to the provisions of this Schedule ("**Technological Improvements**") provided that, before implementation, the Design-Builder shall submit any such Technological Improvement to the Province's Representative in accordance with the Consent Procedure.

PART 2 COMMUNICATIONS AND ENGAGEMENT MANAGEMENT

2.1 Communications and Engagement Obligations

The Design-Builder shall comply with, observe, satisfy and perform all of the obligations and requirements set out in this Schedule (the "**Communications and Engagement Obligations**"), including the following:

- (a) providing an experienced Communications Manager and sufficient supporting communications and community relations staff to meet the requirements set out in this Schedule from the Effective Date to the Total Completion Date;
- (b) being accountable for delivering a comprehensive Traffic Communications program, including developing, implementing, maintaining and updating the Traffic Communication Plan;

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- (c) developing and implementing a comprehensive approach to Construction communications to ensure communities, Stakeholders and the general public are informed and engaged as appropriate, and as required in accordance with this Agreement;
- (d) participating in and supporting the Province in a comprehensive Communications and Engagement program concerning the value, benefits and progress of the Project;
- (e) being responsible for managing any information shared in whatever form for the purposes of communicating information about changes in traffic conditions due to Construction;
- (f) participating in and supporting the Province in anticipating matters relating to the Project that may be of interest and concern to local communities, Stakeholders, the general public and the media, documenting these concerns, and developing and implementing proactive plans that respond to these interests and concerns;
- (g) supporting and contributing to a positive working relationship with the Province, the community, Stakeholders and the general public;
- (h) not changing the branding of the Project Infrastructure or any other Province initiatives or projects;
- (i) not disseminating public information about the Project except as provided in this Schedule and this Agreement;
- (j) working with the Province to build and foster relationships with local residents, businesses, Stakeholders and the general public in order to notify, understand and proactively and appropriately address concerns about the Project Work, using Communications and Engagement best practices;
- (k) exhibiting a high degree of professionalism and courtesy in carrying out the Communications and Engagement Obligations in accordance with this Schedule, including:
 - (i) planning, organizing, providing information for and attending public and Stakeholder events as required in accordance with Sections 5.2 [Community and Stakeholder Engagement Events], 5.3 [Traffic Advisory Committee], and 5.4 [Municipal Liaison] of this Schedule (“**Engagement Events**”), including events that engage with interested parties about Design and Construction including traffic management plans and provide Project updates and gather feedback;
 - (ii) implementing a training module covering best practices for dealing with the public and the media in the Project orientation for Design-Builder employees and Subcontractors;
 - (iii) conduct of staff and contractors within the construction site (such as limiting noise and litter, cleanliness of vehicles);
 - (iv) location of staff and contractor vehicle parking; and
 - (v) maintaining and replacing existing accesses, driveways, sidewalks, bike paths, fencing, information, signs and other Infrastructure;

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- (l) performing the Project Work in accordance with the Communications and Engagement Obligations and this Agreement, including:
 - (i) providing notice of Construction and other Project activities to local communities, Stakeholders and the general public, and maintaining an electronic tracking system for these notifications;
 - (ii) proactively responding to enquiries and concerns from local residents, businesses, Stakeholders and the general public, including working with the construction team to identify and minimize impacts arising from Construction, and maintaining an electronic tracking system for enquiries and responses;
 - (iii) providing information for the website(s) maintained by the Province (the “**Website**”) as set out in Section 4.1.2 of this Schedule;
 - (iv) maintaining a 24/7 Project construction phone line with a live operator as set out in Section 4.1.5 of this Schedule;
 - (v) convening and/or participating in the Traffic Advisory Committee and Engagement Events to seek feedback on Design and Construction and other matters of interest to the general public and Stakeholders;
 - (vi) maintaining an Enquiry-Response electronic tracking system and construction notification and engagement electronic tracking system; and
 - (vii) supporting issues management and crisis communications and resolution.

2.2 Plan Requirements

Table 2.2 sets out the plans which the Design-Builder is required to develop, implement, maintain and update in accordance with this Schedule and the due dates for production of each plan, and specifies whether the plans are required to be submitted to the Province’s Representative under the Review Procedure or the Consent Procedure. In addition to the plans required, this Schedule sets out in Parts 3, 4, 5, 6 and 7 circumstances under which certain deliverables shall be submitted to the Province’s Representative under the Review Procedure or the Consent Procedure, as the case may be, and certain applicable performance measures.

Table 2.2

Performance Measure	Plan	Section of this Schedule	Due Date	Review Procedure or Consent Procedure
PC 2.4a	Design-Builder Communication Protocol (First Submission)	2.4	Initial plan no later than 45 days following the Effective Date	Consent Procedure
PC 2.4b	Design-Builder Communication Protocol (Updates)	2.4	As soon as completed when required, and in any event, no later than June 1 annually	Review Procedure

Performance Measure	Plan	Section of this Schedule	Due Date	Review Procedure or Consent Procedure
PC 2.5a	Construction Communications and Engagement Plan (First Submission)	2.5	Initial plan no later than 60 days following the Effective Date	Consent Procedure
PC 2.5b	Construction Communications and Engagement Plan (Updates)	2.5	As soon as completed when required, and in any event, no later than June 1 annually until Total Completion Date	Review Procedure

2.3 Communications and Engagement Team

- (a) The Design-Builder shall appoint and maintain a team of Communications and Engagement specialists to meet its obligations in relation to this Schedule.
- (b) The Communications Manager shall be a Key Individual subject to the requirements of Section 3.3 [Key Individuals] of Schedule 2 and shall have a minimum of seven years of the following experience:
 - (i) managing traffic construction and operations communications for transportation construction projects comparable to the Project;
 - (ii) working with government communications processes and policies;
 - (iii) developing traffic and communications strategies with the input of multiple stakeholders;
 - (iv) working with issues management related to transportation construction projects; and
 - (v) planning and managing community and stakeholder engagement for transportation construction projects.
- (c) The Design-Builder shall at all times from the Effective Date to the Total Completion Date appoint and maintain a Communications and Engagement team to support the Communications Manager. The members of the team shall have prior experience in community and stakeholder engagement, communications management, writing and issues management, and event management for transportation construction projects.
- (d) The Design-Builder shall at all times from the Effective Date to the Total Completion Date appoint and maintain a media spokesperson who shall have prior relevant experience with media interviews and shall, when requested by the Province, work with the Communications Manager to support the Province’s media relations efforts.

2.4 Design-Builder Communication Protocol

The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule an organization, plan and process for managing the Design-Builder’s execution of the

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Communications and Engagement Obligations (the “**Design-Builder Communication Protocol**”) which shall include, as a minimum, the following information:

- (a) an executive summary;
- (b) a description of the Design-Builder’s Communications and Engagement team, including the number of personnel proposed, roles, responsibilities, and experience of each team member;
- (c) a description of how the Communications Manager will manage each member of the Communications and Engagement team;
- (d) a description of the required qualifications and experience of the Design-Builder’s media spokesperson with respect to media interviews if requested by the Province;
- (e) an organizational chart showing the proposed relationship between the Communications Manager, the rest of the Design-Builder’s Communications and Engagement team, the Design-Builder’s Representative, senior Design-Builder managers and the Province;
- (f) an audience map and summary of the proposed Communications and Engagement tools and tactics proposed to meet the obligations of each of the plans required in accordance with this Schedule; and
- (g) a description of how the Design-Builder. will coordinate Communications and Engagement activities with the Province, including responding to Communications and Engagement-related requests from the Province.

2.5 Construction Communications and Engagement Plan and Sub-Plans

- (a) The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule a plan (the “**Construction Communications and Engagement Plan**”) which shall be in effect until the Total Completion Date and shall include, as a minimum, the following sub-plans:
 - (i) Construction Notification Plan;
 - (ii) Enquiry Response Plan;
 - (iii) Crisis Communications Plan; and
 - (iv) Community and Stakeholder Engagement Plan.
- (b) The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule a plan (the “**Construction Notification Plan**”) which shall include, as a minimum, the following information:
 - (i) a description of the general Project communication activities and Communications and Engagement activities with respect to Construction specifically, and how the Design-Builder will proactively carry out these activities in accordance with the obligations set out in this Schedule including, specifically, how it will:

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- (A) provide notice to local communities, Stakeholders and the general public of Construction, traffic delays, Closures, detours, traffic incidents and emergencies within the timeframes specified using a variety of tools;
 - (B) proactively engage Stakeholders generally and the Traffic Advisory Committee specifically in accordance with the Community and Stakeholder Engagement Plan regarding traffic-related Construction; and
 - (C) support the Province's communications and media relations activities by supplying accurate information about the Project to the Province within the timeframes specified and incorporating into Project notifications the Province's key messages as requested;
- (ii) a detailed description of the communications tools outlined in the Design-Builder Communication Protocol that will be used for traffic-related Construction communications to:
 - (A) minimize traffic disruption and maximize traffic predictability;
 - (B) generate clear, consistent and accessible Construction and traffic information for Stakeholders, the general public and the traffic media; and
 - (C) communicate general Construction and traffic information within the timeframes specified;
 - (iii) proposed templates for traffic-related notification activities including a public notice, advertisement, email and traffic media notice that the Design-Builder will use for notification of Construction and traffic impacts and templates for providing content to the Province for Website updates and social media posts, for typical Construction activities, including a sample Full Closure, typical Lane Closure, sample Lane Shift, and sample Detour;
 - (iv) proposed protocol for managing the text, timing and locations for dynamic sign messages concerning unforeseen events or traffic incidents;
 - (v) a detailed description of how the Design-Builder will track Construction notifications in a live, online database electronic tracking system to electronically and accurately record, track and report out on the type of notification, date it was issued, method of delivery and to whom the notice was issued (for example a copy of the notification, list of Stakeholders, geographic area for mail-out, geographic area for door-to-door delivery); and
 - (vi) reference to and interface with the Traffic Management Plan prepared in accordance with Part 4 [Traffic Management] of Schedule 4, the Table of Commitments in Schedule 6 and all other required interfaces outlined in this Agreement.
- (c) The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule a plan (the "**Enquiry-Response Plan**") which shall outline, as a minimum, how the Design-Builder will:

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- (i) manage and respond to enquiries, suggestions and complaints with respect to the Project;
 - (ii) use a live, online database electronic tracking system to electronically and accurately record, track and report on enquiries and response, with respect to the Project;
 - (iii) keep the electronic tracking system current with updated contact information; and
 - (iv) meet FOIPPA, CASL and Provincial privacy and security requirements.
- (d) The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule a plan (the "**Crisis Communication Plan**") which shall outline, as a minimum, the following information:
- (i) the type and severity of potential crisis situations that could arise during the Construction;
 - (ii) how the Design-Builder will interface with and integrate with emergency responders and others as appropriate with respect to crisis communications;
 - (iii) the audiences, tactics and tools proposed to be used in responding to a crisis situation;
 - (iv) a list of key contacts and contact numbers, including contact information for the Design-Builder's media spokesperson;
 - (v) a preliminary work plan for initial triage in the event that a crisis occurs; and
 - (vi) how the Crisis Communication Plan interfaces with the Incident Management Plan prepared in accordance with Section 7.2.2 [Incident Management Plan] of Part 4 of Schedule 4.
- (e) The Design-Builder shall develop, implement, maintain and update in accordance with this Schedule a plan (the "**Community and Stakeholder Engagement Plan**") which shall clearly describe how the Design-Builder will meet its obligations for Community and Stakeholder Engagement under this Agreement, including, as a minimum, how the Design-Builder will:
- (i) coordinate Communications and Engagement activities with the Province, including responding to Communications and Engagement-related requests from the Province;
 - (ii) manage a proactive program for building relationships with and keeping the Traffic Advisory Committee informed through on-going two-way communication about the Project to provide regular information about Construction and related impacts, Traffic Management, and other matters that may be required in accordance with this Agreement;
 - (iii) proactively manage regular contact with adjacent businesses and property owners regarding Construction to identify and minimize impacts arising from

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Construction and proactively manage and respond to day-to-day enquiries and concerns from Stakeholders and local residents on issues and concerns arising out of Construction, including notification and timing of Construction, noise, hours of work and construction updates;

- (iv) participate in a proactive Community and Stakeholder Engagement program to build relationships, provide local communities, Stakeholders and the general public with regular information about Project designs, plans, benefits, impacts and Construction, including but not limited to public information sessions, open houses, responding to questions and concerns, and organizing and/or attending other meetings that the Province may deem appropriate, community-specific engagement on aspects like noise management and mitigation, habitat protection, landscaping, milestone announcements and celebrations;
- (v) consider accommodating general public and Stakeholder input in finalizing the Design;
- (vi) support the Province in undertaking other community relations programs and events that the Province considers necessary or desirable, from time to time;
- (vii) plan and attend Province-directed Engagement Events (including meetings, municipal council and local government presentations) as the Province deems necessary or desirable, and provide all meeting materials that may reasonably be required;
- (viii) track all meetings, Engagement Events, and other events using the construction notification and engagement electronic tracking system;
- (ix) support reasonable Stakeholder initiatives, as approved by the Province;
- (x) provide appropriately experienced personnel to plan, manage, attend and follow up as appropriate on any meetings, events, or initiatives, to maintain a positive working relationship with the Province and with Stakeholders;
- (xi) immediately notify the Province of any issues or potential issues to facilitate timely resolution;
- (xii) in consultation with the Province, develop and implement strategies to track, address, mitigate and minimize any issues or potential issues; and
- (xiii) respond to emerging issues or potential issues identified by the Province within the timeframe specified by the Province.

2.6 Performance Measures

- (a) The Tables in each of Part 3 [Design-Builder Communication Protocol], Part 4 [Construction Communications Performance Measures], Part 5 [Community and Stakeholder Engagement Performance Measures] and Part 6 [Media and Government Relations Performance Measures] of this Schedule set out performance measures to be met by the Design-Builder in relation to Communications and Engagement and the applicable timing for each such performance measure, where applicable, and also specify whether any

deliverables included within such performance measures are required to be submitted to the Province Representative under the Review Procedure or the Consent Procedure.

- (b) In respect of any performance measure set out in such Tables with a designation of “Minor”, “Moderate”, “Major”, or “Severe” in a column entitled “Performance Mechanism Index”, such designation indicates, in respect of the performance measure corresponding to such designation, the basis on which NCE Points and Default Points will be assigned in accordance with Part 5 [NCE Points and Default Points] of Schedule 10 to this Agreement.

**PART 3
DESIGN-BUILDER COMMUNICATION PROTOCOL PERFORMANCE MEASURES**

Table 3

	Performance Measure	Timing	Performance Mechanism Index
3.1	Communications Working Group:		
	(a) The Design-Builder shall convene, organize and maintain a group (the “ Communications Working Group ”) that will meet regularly with the Province. The Design-Builder representation on the Communications Working Group shall comprise Communications and Engagement staff from the Design-Builder including the Communications Manager, the Design Manager, the Traffic Manager, the Construction Manager and others as appropriate to foster a positive working relationship between the Design-Builder and the Province with respect to Communications and Engagement activities and to build a community and Stakeholder-focused approach to the Project and Construction management and mitigation of impacts due to Construction;		Moderate
	(b) The Design-Builder shall convene an initial meeting of the Communications Working Group;	No later than 30 days following the Effective Date	Moderate
	(c) The Design-Builder shall convene regular meetings of the Communications Working Group;	At a minimum, monthly up to the Total Completion Date	Moderate
	(d) the Design-Builder shall present a 4-month look ahead calendar identifying planned Project activities that warrant action under this Schedule and proposed related Communications and Engagement actions;	At every meeting (at least monthly)	Minor
	(e) the Design-Builder shall report on the status of the Enquiry-Response electronic tracking system, including as a minimum, the number of enquiries, the status of responses to enquiries, and the completeness and timeliness of content updates;	At every meeting (at least monthly)	Moderate

	Performance Measure	Timing	Performance Mechanism Index
	(f) the Design-Builder shall report on the status of the construction notification and engagement tracking system, including notification of Construction activities and traffic impacts, including notifications that have been sent, the date, the method for distribution, and the distribution area, as well as upcoming notifications including proposed timing, method for distribution and distribution area;	At every meeting (at least monthly)	Moderate
	(g) the Design-Builder shall prepare an agenda for the meetings that will allow for information sharing, discussion of matters of interest to communities, Stakeholders and the general public, and identification of and response to emerging issues; and	For each meeting (at least monthly)	Minor
	(h) the Design-Builder shall prepare and distribute meeting notes following each meeting.	Within 7 days of each meeting	Minor
3.2 Evaluation and Reporting			
	The Design-Builder's Quality Audits of Communications and Engagement shall include audits of the Design-Builder's Communications and Engagement performance, which shall include, among other audit items, the following information:	In accordance with the Design-Builder's Quality Audit Plans and as indicated below	Moderate
	(a) assessment of performance in relation to the following Communications and Engagement plans and associated activities, including recommendations for how the Design-Builder will incorporate improvements into the annual updates of the respective plans: (i) the Design-Builder Communication Protocol; and (ii) Construction Communications and Engagement Plan.	Annually, no later than March 1	Moderate

**PART 4
CONSTRUCTION COMMUNICATIONS PERFORMANCE MEASURES**

Table 4

	Performance Measure	Timing	Performance Mechanism Index
4.1 General Communication			
4.1.1	Project Identity and Graphic Design: The Design-Builder shall use and apply to all informational materials the visual identity and graphic standards provided for the Project to the Design-Builder by the Province.	For all materials submitted in accordance with all Schedules	Major
4.1.2	Website: At all times, the Design-Builder shall:		
	(a) provide to the Province up-to-date traffic advisories with current traffic information in the approved template that can be applied to the Website;	Weekly	Minor

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 9: COMMUNICATIONS AND ENGAGEMENT**

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	Performance Measure	Timing	Performance Mechanism Index
	(b) provide to the Province Construction updates, in a format that can be applied to the Website;	Weekly	Minor
	(c) provide to the Province Construction Schedule updates including key milestones, in the approved template that can be applied to the Website;	Monthly	Minor
	(d) provide to the Province photos and videos demonstrating Project activities in relation to Section 4.1.9 of this Schedule;	As requested by the Province	Minor
	(e) provide to the Province information for job-seekers and potential Subcontractors including any apprenticeship programs offered by the Design-Builder;	At a minimum monthly	Moderate
	(f) submit such content described in Section 4.1.2(a) through 4.1.2(c) of this Schedule to the Province pursuant to the Consent Procedure; and		
	(g) ensure that material provided considers and appropriately accommodates the needs of users with visual, hearing and motor skill challenges.	For each submission	Minor
4.1.3	Social Media: At all times, the Design-Builder shall:		
	(h) provide text and multimedia content to the Province to support the Province's social media strategy for the Project, which may include Twitter, Facebook, YouTube, Flickr and that may be expanded to include other tools and techniques; and	As requested by Province	Minor
	(i) submit such content described in Section 4.1.3(a) of this Schedule to the Province pursuant to the Review Procedure.		
4.1.4	Enquiry-Response Plan and Electronic Tracking System: The Design-Builder shall:		
	(a) respond to enquiries by telephone, e-mail or other written correspondence (where appropriate) within targeted response times as follows:		
	(i) calls related to traffic safety, traffic incidents or emergencies;	Within 5 minutes	Major
	(ii) urgent calls (at all times) and emails (during business hours) related to Construction impacts, traffic disruption/impacts;	As soon as possible, but in no event later than 1 hour after receipt of the enquiry	Major
	(iii) other enquiries related to Construction; and	98% within 3 days; 100% within 5 days	Moderate
	(iv) general enquiries;	98% within 3 days; 100% within 5 days	Minor

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 9: COMMUNICATIONS AND ENGAGEMENT**

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	Performance Measure	Timing	Performance Mechanism Index
	(b) ensure that responses explain how the subject matter of the enquiry will be addressed;		Minor
	(c) implement a live electronic tracking system using an online database, to track Enquiry-Response activities, including all contact by telephone, email, at meetings and Engagement Events, in person and written correspondence (including enquiries, suggestions, concerns and compliments) and responses provided/actions taken (the system shall provide live access to the current status to both the Design-Builder and the Province); and	Within 30 days of the Effective Date	Major
	(d) keep updated in the electronic tracking system, all fields required to satisfy all tracking and reporting requirements, which shall include, as a minimum, a description of the enquiry/concern, response time, time to meet on site if required, meeting location and attendees, the time to complete the appropriate action, follow up on responses or actions, tracking of repeat enquiries/issues, and where a concern may not be justified or satisfaction is not possible, a record of the steps taken and advice given must be recorded.	Current to within 1 Business Day	Moderate
	(e) ensure the system stores data only in Canada, provides secure, live access to the current status of Enquiry-Response activities and tracking to both the Design-Builder and the Province;		Minor
	(f) submit such information described in Section 4.1.4(a), (b) and (c) of this Schedule to the Province pursuant to the Review Procedure.		
4.1.5	Project Construction Phone Line: The Design-Builder shall:		
	(a) establish, manage and maintain a 24/7 traffic information Project phone line with a live operator at all times to:	Launch within 30 days of the Effective Date	Major
	(i) provide, without limitation, 24/7 site contact information and specific provisions for priority access in the event of a Code 3 Response (B.C. Ambulance Service Radio Code 3 emergency vehicle response to a call using lights and siren) or public emergency as warranted by emergency response agencies; and	At all times	Severe
	(ii) receive and respond to general public enquiries about the Project in accordance with the timeframes specified in Section 4.1.4(a) of this Schedule;		
	(b) develop, implement, and maintain, a proposed training protocol for operators, including process flow charts for action with respect to different types of calls; and	Within 30 days of the Effective Date and as soon as updated	Minor
	(c) submit the proposed training protocol described in Section 4.1.5(b) of this Schedule to the Province pursuant to the Review Procedure.		

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 9: COMMUNICATIONS AND ENGAGEMENT**

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	Performance Measure	Timing	Performance Mechanism Index
4.1.6	Construction and Traffic Notifications: The Design-Builder shall:		
	(a) provide using the Province pre-approved email templates, email notification regarding Construction and Operation and Maintenance activities that have the potential to adversely affect traffic, including but not limited to Stoppages, Lane Closures, Lane Shifts or Detours, to:		
	(i) the Province’s Provincial Highways Condition Centre/Drive BC traveller information system:	(A) no later than 1 week in advance of the scheduled activity;	Moderate
		(B) immediately upon actual occurrence of the scheduled Lane Closure, Stoppage or permitted Full Closure and upon its termination; and	Moderate
		(C) within 15 minutes in the event that the activity is postponed or rescheduled	Moderate
	(ii) emergency responders (including but not limited to Police, fire, ambulance, search and rescue, regional health authorities, area hospitals and Municipal and regional emergency service providers), TransLink and Coast Mountain Bus Company:	(A) no later than 1 week in advance of the scheduled activity;	Moderate
		(B) immediately upon actual occurrence of the scheduled Lane Closure, Stoppage or permitted Full Closure and upon its termination; and	Moderate

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	Performance Measure	Timing	Performance Mechanism Index
		(C) within 15 minutes in the event that the activity is postponed or rescheduled	Minor
	(iii) traffic media:	(A) no later than 48 hours prior to the scheduled activity; and	Moderate
		(B) in the event that the activity is postponed or rescheduled, 1 day in advance of the postponement	Moderate
	(b) develop and distribute to identified TransLink and Coast Mountain Bus Company representatives using the Province pre-approved email or mail templates, notification of Construction or Operation and Maintenance activity that has the potential to affect bus schedules;	No later than 1 month in advance of the scheduled activity	Moderate
	(c) develop and distribute using the Province pre-approved email or mail templates, notification of Construction, including traffic notifications, for email subscribers, local communities, Stakeholders and the general public:	(A) no later than 1 week in advance of the scheduled activity for activities such as a Lane Closure or daytime construction;	Moderate
		(B) no later than 2 weeks in advance of the scheduled activity for activities such as pile driving, significant noise, or nighttime construction of shorter duration;	Moderate

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	Performance Measure	Timing	Performance Mechanism Index
		(C) no later than 4 weeks in advance of the scheduled activity for activities such as a Full Closure or nighttime construction of longer duration; and	
		(D) within 1 Business Day in the event that the activity is postponed or rescheduled;	
	(d) submit all email notifications to the Province pursuant to the Review Procedure; and	Submit 2 weeks prior to scheduled distribution	
	(e) implement and keep updated a live construction notification and engagement electronic tracking system using an online database, to track Construction and traffic notification activities, including mail-out areas, email distribution lists, door-to-door delivery or visits; (the system shall provide live access to the current status to both the Design-Builder and the Province).	Within 30 days of the Effective Date	
4.1.7	Advertising Communications: The Design-Builder shall:		
	(a) provide information and content regarding general Project information, Construction activities and traffic impacts to the Province to support advertising or Project updates that the Province may undertake;	Within 2 weeks of request by the Province	Moderate
	(b) communicate notice of Construction activities that are of significant impact or duration, via construction notices through direct mail to residents and businesses within a 2 kilometre distribution radius of the area/interchange of impact and via email to the contact information in the electronic tracking system;	Not less than 1 week in advance of scheduled Construction activity	Major
	(c) submit all material in Section 4.1.7(a) and (b) of this Schedule to the Province's Representative pursuant to the Consent Procedure; and	Not less than 15 days before intended distribution	Moderate
	(d) submit to the Province for consideration pursuant to the Consent Procedure any other proposed forms of notification that provide equivalent or better reach, including text message notifications, or other techniques.	Before adopting for use	

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	Performance Measure	Timing	Performance Mechanism Index
4.1.8	Information Signs: The Design-Builder shall:		
	(a) during Construction:		
	(i) arrange, produce, install, remove, store and manage static and dynamic signs to provide road users with information about upcoming Construction activities that have the potential to affect traffic and/or access to businesses;	As required	Major
	(ii) ensure that signs meet Province standards and are of appropriate size, colour, lighting and location to ensure visibility;		Minor
	(iii) include the Project phone line number on all Project signs and all Design-Builder signs in a font size large enough to be visible to drivers;		Moderate
	(iv) keep signs in good condition when installed and repair or replace damaged signs within 48 hours;		Moderate
	(v) remove graffiti on signs within 48 hours, or, if graffiti cannot be removed, replace signs within 72 hours; and		Moderate
	(vi) provide personnel to install, remove, and relocate signs on an expedited basis as required and if requested by the Province;		Minor
	(b) submit to the Province pursuant to the Review Procedure before intended deployment, proposed text, timing and location of all proposed static and dynamic message signs including shop drawings; installation details and a mock-up of the text; and confirmation of permits (if applicable);	Not less than 15 days before deployment	
	(c) ensure that portable dynamic message signs provide advance notification of planned traffic pattern changes;	Minimum of 5 Business Days prior to the date of implementation	Moderate
	(d) for all static signs, use colours and designs, consistent with the visual identity and graphic standard provided that:		
	(i) identifies the Project Infrastructure in such a manner as to ensure that it is clear in the general public's perception that the Project Infrastructure is part of the Provincial Highway System;		Moderate
	(ii) visually differentiates from the Province and other government agencies;		Moderate
	(iii) clearly communicates the Project intent; and		Minor
	(iv) is consistent with other Design-Builder Communications and Engagement material for the Project, as accepted by the Province in accordance with this Schedule;		Minor

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	Performance Measure	Timing	Performance Mechanism Index
	(e) submit to the Province pursuant to the Consent Procedure prior to installation, erection or removal, the location, content and format of all permanent signs and notices to be installed or erected on the Project Site, and any signs proposed to be removed; and	14 days prior to scheduled installation, erection or removal	
	(f) install Provincial funding signs in a location specified by the Province; provide personnel to install, remove and relocate signs on an expedited basis as required.	Within 1 week of Province request	
4.1.9	Photography and Videography: To record and demonstrate progress of the Project from start of Construction to the Substantial Completion Date, the Design-Builder shall provide to the Province:		
	(a) high resolution photos for shared, royalty-free use by the Province, in publications, advertising, presentations and on public websites;	At least monthly	Minor
	(b) professional quality, high resolution photos, graphics and images for shared and royalty-free use by the Province, in publications, advertising, presentations and on public websites;	For all major Project milestones	Minor
	(c) aerial photography to demonstrate progress of construction along the entire Project Site	At least quarterly	Moderate
	(d) professional quality, high resolution video clips for shared and royalty-free use by the Province, in publications, advertising, presentations and on public websites;	For all major Project milestones	Minor
	(e) access and assistance for the Province and its sub-contractors to collect time-lapse videos of construction of the New Highway 17/91C Interchange and the New Nordel Way Overpass across Highway 91, and/or other key locations on the Project Site as may be determined by the Province; and	From start of Construction to all major Project milestones and to Substantial Completion Date	Major
	(f) access and assistance for any photographers, videographers or media personnel designated by the Province.	On request of Province	Minor
4.2	Issues Management		
	At all times until the Total Completion Date, the Design-Builder shall:		
	(a) immediately notify the Province of any issues or potential issues to facilitate timely resolution;	As identified	Moderate
	(b) consult with and provide reasonable assistance to the Province with respect to identifying emerging issues;	As identified	Minor
	(c) in consultation with the Province and pursuant to the Review Procedure, develop and implement strategies to: <ul style="list-style-type: none"> (i) track, address, mitigate and minimize any issues or potential issues; 		Minor

	Performance Measure	Timing	Performance Mechanism Index
	(ii) share information about any issues or potential issues with emergency responders, Stakeholders or other interested parties as may be identified;		Minor
	(iii) work with the Province to develop messages regarding the Design-Builder’s response to any issues or potential issues and communicate them to affected Stakeholders; and		Minor
	(iv) report to the Province on progress/success of mitigation measures with respect to any issues or potential issues;		Minor
	(d) respond to emerging issues or potential issues identified by the Province within the timeframe specified by the Province, acting reasonably; and	As determined by the Province	Moderate
	(e) keep current and available to the Province at all times, a list of key contact names and cell phone numbers that the Province can access to support issues management response.	Within 5 Business Days of the Effective Date and thereafter within 1 day of any change	Moderate
4.3 Crisis Communication			
	At all times until the Total Completion Date the Design-Builder shall: (a) provide assistance to the Province in the Province’s development of any supplemental communication plans and strategies;		Minor
	(b) during a crisis situation, make available sufficient and appropriate Project personnel to effectively manage and perform the Design-Builder’s responsibilities; and	Within 30 minutes of request by Province	Severe
	(c) draft and submit to the Province pursuant to the Consent Procedure, proactive and responsive content for crisis situations when a crisis arises.	No later than 2 hours after the Design-Builder or the Province becomes aware of a crisis situation	

**PART 5
COMMUNITY AND STAKEHOLDER ENGAGEMENT PERFORMANCE MEASURES**

Table 5

	Performance Measure	Timing	Performance Mechanism Index
5.1	Community and Stakeholder Engagement Activities and Engagement Events		
	The Design-Builder shall participate in Community and Stakeholder Engagement activities and Engagement Events, which shall include the following matters.		
	(a) participate in engagement activities and Engagement Events which shall include design refinements, traffic-related Construction and measures to mitigate impacts of Construction;	Until the Total Completion Date	Moderate
	(b) support and attend Province-sponsored open house Engagement Events to:		
	(ii) inform interested parties about Project designs (minimum of two Engagement Events); and	As required by the Province	Moderate
	(iii) engage communities to seek input on the Design-Builder's design process using materials developed in accordance with Section 5.1(a) of this Schedule (total number to be determined based on Design-Builder's Interim Design and Final Design);	Based on Design Schedule	Moderate
	(c) for each open house Engagement Event described in Section 5.1(a) of this Schedule, the Design-Builder shall:	As required by the Province	
	(i) provide content for Engagement Event materials including information and high-quality renderings and graphics about Project designs; and information and high-quality graphics regarding Construction activities and traffic impacts;	No later than 4 weeks prior to each Engagement Event	Minor
	(ii) provide appropriate personnel to support planning and to attend all Engagement Events, including technical staff, subject matter experts and community relations personnel;		Minor
	(iii) provide any other Engagement Event logistics required;		Minor
	(iv) consider all concerns, issues and matters raised by resident groups, business groups and Stakeholders and prepare a report for future meetings which must:		
	(A) demonstrate in detail how the Design-Builder considered the concerns, issues and matters raised by residents, businesses and Stakeholders and how the Design-Builder proposes to address and remedy each of the concerns, issues and matters raised; and	Within 4 weeks of any Engagement Event	Moderate

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	Performance Measure	Timing	Performance Mechanism Index
	(B) if, in the report in the paragraph (i) above, the Design-Builder proposed not to address or remedy in whole or in part any concern, issue or matter raised by resident groups, business groups or Stakeholders, provide reasons why it proposes not to address or remedy in whole or in part any concern, issue or matter raised by these groups;		
	(d) submit all Engagement Event summary reports described in Section 5.1(c) of this Schedule to the Province pursuant to the Consent Procedure; and	Within 30 days following the Engagement Event	
	(e) track all meetings and events using the electronic tracking system.	Within 1 day of scheduling or rescheduling	Minor
5.2 General Community Relations			
	The Design-Builder shall, until the Total Completion Date prepare content for a quarterly Project update which the Province may send by direct mail to affected residents and businesses, and an electronic copy of which may be posted to the Website.	Initially no later than 90 days after start of Construction, then every 90 days	Minor
5.3 Traffic Advisory Committee			
	The Design-Builder, shall: (a) prior to the commencement of any Construction on the Project Site, work with the Province to establish a multi-Stakeholder advisory group (the “ Traffic Advisory Committee ”), which the Province will Chair and which will be comprised of representative emergency responders, Municipal staff, goods movers, TransLink, Coast Mountain Bus Company, and other local and regional Stakeholders as may be appropriate, and which will provide advice and input to road-based Traffic Management plans and Communications and Engagement with road users with respect to traffic-related Construction;	No later than 60 days after the Effective Date	Major
	(b) compile and keep current the full membership for the Traffic Advisory Committee in accordance with this Schedule, information from the Province, and any obligations set out in the Table of Commitments, including a current list of names and contact information;		Minor
	(c) adhere to the terms of reference, developed by the Province, for the Traffic Advisory Committee, which shall address membership of the Traffic Advisory Committee, meeting frequency and format, and the meeting facilitation and chair;	30 days prior to the first meeting	

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	Performance Measure	Timing	Performance Mechanism Index
	(d) until the Total Completion Date, convene meetings with the Traffic Advisory Committee to discuss the Project and Construction that has the potential to affect road-based traffic;	60 days in advance of commencing Construction activities and thereafter at least once per quarter or more frequently as Construction activities warrant	Minor
	(e) submit to the Province draft agendas for Traffic Advisory Committee meetings pursuant to the Review Procedure;	At least 14 days before each meeting	
	(f) distribute agendas to the relevant Traffic Advisory Committee members;	7 days before each meeting	Minor
	(g) consult with the Traffic Advisory Committee members regarding their concerns, issues and other matters relating to the Project;	At each meeting	Minor
	(h) consider all concerns, issues and matters raised by the Traffic Advisory Committee at each meeting, and prepare a report for such meeting, which must: (i) demonstrate in detail how the Design-Builder considered the concerns, issues and matters raised by the Multi-Stakeholder Advisory Group and how the Design-Builder proposes to address and remedy each of the concerns, issues and matters raised; and		Moderate
	(ii) if, in the such report, the Design-Builder proposes not to address or remedy in whole or in part any concern, issue or matter raised by the Traffic Advisory Committee, provide reasons why it proposes not to address or remedy in whole or in part any concern, issue or matter raised by the Traffic Advisory Committee;		Moderate
	(i) submit to the Province all such Traffic Advisory Committee meeting reports described in Section 5.3(h) of this Schedule pursuant to the Consent Procedure;	Within 15 days of each meeting	
	(j) deliver all accepted Traffic Advisory Committee meeting reports described in Section 5.3(h) of this Schedule to the Province and representatives of the relevant Traffic Advisory Committee; and	Within 2 Business Days of acceptance pursuant to Consent Procedure	Moderate

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	Performance Measure	Timing	Performance Mechanism Index
	(k) track all meetings and events using the Enquiry-Response electronic tracking system.	Within 1 day of scheduling or rescheduling to be updated within 1 day after the meeting	Minor
5.4 Municipal Liaison			
	The Design-Builder shall, during Construction, meet monthly with the Province and staff from the Municipality, and shall:	As requested by the Province	Moderate
	(b) consider all concerns, issues and matters raised by Municipal staff at each meeting, and prepare a report for such meeting, which must: (i) demonstrate in detail how the Design-Builder considered the concerns, issues and matters raised by the Municipality and how the Design-Builder proposes to address and remedy each of the concerns, issues and matters raised; and	As requested by the Province	Minor
	(ii) if, in such report, the Design-Builder proposes not to address or remedy in whole or in part any concern, issue or matter raised by the Municipality, provide reasons why it proposes not to address or remedy in whole or in part any concern, issue or matter raised by the Municipality;	As requested by the Province	Minor
	(c) submit to the Province all such meeting reports described in Section 5.4(a) of this Schedule pursuant to the Consent Procedure; and	Within 15 days of each meeting	
	(d) track all meetings and events using the construction notification and engagement electronic tracking system.	Within 1 day of scheduling or rescheduling, to be updated within 1 day after the meeting	Minor
5.5 Property Owner Liaison/Local Resident/Business Liaison:			
	In consultation with the Province, the Design-Builder shall: (a) provide notification of Construction and regular Project updates to the immediately-affected neighbourhoods, property owners and tenants and businesses, including going door to door as necessary;	At least quarterly or more frequently as Construction warrants	Minor
	(b) notify affected neighbourhoods, property owners and tenants of any unplanned or unexpected impacts of Construction, including going door-to-door if necessary and track these notifications in the construction notification and engagement electronic tracking system;	As soon as safely practicable	Minor

	Performance Measure	Timing	Performance Mechanism Index
	(c) communicate and arrange meetings in advance with residents and businesses where the Design-Builder requires access to private properties;	Within 1 week of intended access	Minor
	(d) participate in meetings with local resident groups and businesses to provide updated information on projected construction and traffic impacts, and hear concerns, issues and other matters raised on all matters relating to the Project;	As scheduled or rescheduled	Moderate
	(e) consider all concerns, issues and matters raised by local resident groups and businesses at each meeting;	Within 1 week of the meeting	Minor
	(f) proactively address enquiries, issues and concerns raised including working with the construction team to identify and minimize impacts arising from Construction; and	In accordance with 4.1.4(a) of this Schedule	Minor
	(g) track all meetings and door to door visits and any follow up required using the electronic tracking system.	Within 1 day of scheduling or rescheduling, to be updated within 1 day after the meeting	Minor

**PART 6
MEDIA AND GOVERNMENT RELATIONS PERFORMANCE MEASURES**

Table 6

	Performance Measure	Timing	Performance Mechanism Index
6.1	No Media Relations Activities		
	With the exception of email notices to traffic media which the Design-Builder shall undertake in accordance with Section 4.1.6(a)(iv) of this Schedule, the Design-Builder shall not undertake any activities relating to media relations except where requested by the Province.		Severe
6.2	Media Relations Support		
	The Design-Builder must, at all times until the Total Completion Date, support the Province for the following activities relating to media relations: (a) direct all media enquiries and interview requests to the Province's Representative so that the Province can determine the organization that is most suitable to respond to the enquiry;	Within 1 hour of receiving request from Province	Moderate
	(b) support the Province's communications and media relations activities by supplying accurate information about the Project to the Province within the timeframes specified;	On request by Province	Minor

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	Performance Measure	Timing	Performance Mechanism Index
	(c) provide all information and data regarding the status of the Project, any traffic incidents, emergencies or other occurrences on the New Project Infrastructure and any other information and data the Province may request in order to appropriately respond to media enquiries;	Within the timeframes requested by Province	Minor
	(d) make available an experienced media spokesperson (with back-up trained media personnel) as requested by the Province;	Within the timeframes requested by Province	Moderate
	(e) provide 24/7 availability of media communications staff to monitor, draft messaging, and 24/7 access to subject matter experts to support response to media enquiries as requested by the Province; and	Continually	Moderate
	(f) make technical and subject matter experts available to the Province's media relations staff as required for the purposes of responding to technical matters related to media requests.	Within the timeframes requested by Province	Moderate
6.3 Media Releases			
	The Province, in its sole discretion, will determine when media releases are required and will distribute them. At all times until the Total Completion Date, the Design-Builder shall: (a) as requested by the Province, prepare material for such notices; and	As requested by Province	Major
	(b) recommend to the Province's Representative issue-specific communication protocols for incident management, which require immediate issuance of media release.		Minor
6.4 Governmental Authority Liaison Support			
	Without limiting any and all other obligations to proactively liaise with Governmental Authorities in accordance with this Agreement, the Design-Builder shall: (a) proactively support the Province in liaising with affected Governmental Authorities, by providing information about the Project status, upcoming milestones and issues that may affect the Project and reviewing, within the timeframes specified by the Province, any materials produced by the Province for such liaison activities; and	As requested by Province	Minor
	(b) participate in meetings as and when requested by the Province.	As requested by Province	Minor
6.5 No Public Announcements			
	Neither the Design-Builder nor any of its Subcontractors shall issue or disseminate any media release, public announcement or public disclosure relating to the Project without the Province's prior written consent.		Severe

**SCHEDULE 10
PAYMENT AND PERFORMANCE MECHANISM**

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DIVISION I
PROVINCE PAYMENTS TO DESIGN-BUILDER

PART 1
PAYMENT OBLIGATIONS OF PROVINCE

1.1 Obligation to make Progress Payments

- (a) Subject to the provisions of this Schedule, the Province shall make Progress Payments, in arrears, to the Design-Builder on account of the Contract Price in the amounts determined in accordance with Part 2 [Calculation of Progress Payments] of this Schedule and the procedure set out in Part 10 [Payments].
- (b) Subject to the provisions of Part 10 [Payments], each such Progress Payment shall be calculated in accordance with Part 2 [Calculation of Progress Payments] of this Schedule.
- (c) Without prejudice to Section 10.8 [Payment of Disputed Amounts], the Province shall, after withholding:
 - (i) any amount to be retained in respect of the Progress Payment Holdback in accordance with Section 2.1(a)(iv) of this Schedule;
 - (ii) any amount to be retained in respect of the Deficiency Holdback in accordance with Section 2.1(a)(v) of this Schedule; and
 - (iii) any amount to be retained in respect of the Warranty Holdback in accordance with Section 2.1(a)(vi) of this Schedule,

make payment to the Design-Builder of the net amount approved in respect of a Draw Request pursuant to Section 6.1(h) of this Schedule by not later than the fifth Business Day following approval in respect of the Draw Request pursuant to Section 6.1(h) of this Schedule.

- (d) The Province shall have no obligation to pay or be responsible in any way for payments to Subcontractors.

PART 2
CALCULATION OF PROGRESS PAYMENTS

2.1 Calculation of Progress Payments

- (a) Subject to Sections 2.1(c) and 2.1(d) of this Schedule, the Progress Payment for each Payment Period shall be an amount equal to the total of the amounts described in Sections 2.1(a)(i), (ii) and (iii) below:
 - (i) the amount (the “**Progress Amount**”) that is the aggregate of all the Cost Item Progress Amounts (other than a Cost Item Amount payable in respect of a Specified Cost Item identified in Appendix B [Progress Measurement Principles] to this Schedule) each of which is determined in accordance with Section 2.1(b) of this Schedule for Payment Period *p*;

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- (ii) the aggregate of all the Cost Item Amounts in respect of Specified Cost Items, each of which amounts is determined in accordance with Section 2.1(b) of this Schedule to be payable in respect of Payment Period p ; and
- (iii) for the Payment Period in which the Substantial Completion Date occurs, the total amount of the Progress Payment Holdbacks previously retained by the Province in accordance with Section 2.1(a)(iv) below,

less the amounts, if any, described in Sections 2.1(a)(iv), (v) and (vi) below:

- (iv) for each Payment Period prior to the Payment Period in which the Substantial Completion Date occurs, an amount (the “**Progress Payment Holdback**”) equal to 5% of the total of the amounts described in Sections 2.1(a)(i) and (ii) above;
 - (v) for the Payment Period in which the Substantial Completion Date occurs, the Deficiency Holdback; and
 - (vi) for the Payment Period in which the Substantial Completion Date occurs, the Warranty Holdback.
- (b) Each Cost Item Progress Amount for Payment Period p shall be determined in accordance with the following formula:

$$CIPAp = CIA_{ci} \times RC_p\%$$

where:

$CIPAp$ = the amount (the “**Cost Item Progress Amount**”) that is determined for Payment Period p for work completed during Payment Period p in respect of a Cost Item (other than a Specified Cost Item identified in Appendix B [Progress Measurement Principles] to this Schedule) identified in the applicable Statement of Progress submitted by the Design-Builder pursuant to Section 6.1 [Draw Requests for Progress Payments] of this Schedule

CIA_{ci} = the Cost Item Amount allocated to that Cost Item in Appendix B [Progress Measurement Principles] to this Schedule

$RC_p\%$ = the percentage amount (the “**Relevant Completion Percentage**”) applicable to that Cost Item for Payment Period p , determined as the result obtained by subtracting:

- (i) the total progress made by the Design-Builder (expressed as a percentage), during all Payment Periods up to and including the Payment Period that immediately precedes Payment Period p , toward completion of that Cost Item;

from:

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- (ii) the total progress made by the Design-Builder (expressed as a percentage), during all Payment Periods up to and including Payment Period *p*, toward completion of that Cost Item;

For certainty, the Relevant Completion Percentage may, in certain circumstances, be a negative amount (including, for example, if the progress toward completion of the applicable Cost Item, as certified by the Independent Engineer in respect of one or more Payment Periods, is subsequently determined to have been overstated).

- (c) The maximum aggregate amount payable by the Province in respect of Progress Payments pursuant to this Schedule shall be an amount equal to the Contract Price.

DIVISION II
DESIGN-BUILDER PAYMENTS TO PROVINCE

PART 3
PAYMENT OBLIGATIONS OF DESIGN-BUILDER

3.1 Obligation to make Performance Incentive Payments

- (a) The Design-Builder shall pay to the Province a Performance Incentive Payment in respect of each Payment Period any portion of which occurs during the period commencing on the Effective Date and ending on (and including) the Total Completion Date.
- (b) Subject to the provisions of Part 10 [Payments], each such Performance Incentive Payment shall be determined in accordance with Section 4.1 [Calculation of Performance Incentive Payments] of this Schedule.
- (c) If any report delivered pursuant to Section 6.2 [Reports for Performance Incentive Payments] of this Schedule shows a net amount owing by the Design-Builder to the Province then, without prejudice to Section 10.8 [Payment of Disputed Amounts], the Design-Builder shall pay and remit to the Province such amount not later than:
 - (i) the last day of the Payment Period following the Payment Period (or part thereof, as the case may be) to which the said report relates; and
 - (ii) the tenth Business Day after the Design-Builder has delivered the said report.
- (d) If any report delivered pursuant to Section 6.2 [Reports for Performance Incentive Payments] of this Schedule shows a net amount owing by the Province to the Design-Builder, it shall be accompanied by an invoice from the Design-Builder to the Province in respect of such net amount (which invoice will separately identify any applicable taxes included in the calculation of such amount). Without prejudice to Section 10.8 [Payment of Disputed Amounts], the Province shall pay to the Design-Builder the amount of any such invoice issued by the Design-Builder not later than the later of:

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- (i) the last day of the Payment Period following the Payment Period (or part thereof, as the case may be) to which the invoice relates; and
- (ii) the tenth Business Day after the Province has received both the said invoice and the said report (together with the work papers referred to in Section 6.2(b) of this Schedule) in respect of such Payment Period (or part thereof, as the case may be).

3.2 Obligation to pay Delay Liquidated Damages

- (a) If the Substantial Completion Date does not occur on or before the Substantial Completion Target Date, subject to Section 9.3(b) and except to the extent such delay is directly attributable to a Province Non-Excusable Event, the Design-Builder shall pay to the Province liquidated damages (“**Delay Liquidated Damages**”) in an amount equal to for each day (or part thereof; for certainty, without pro-rating) from (but excluding) the Substantial Completion Target Date until (and including) the Substantial Completion Date.
- (b) Delay Liquidated Damages shall accrue on a daily basis and be payable by the Design-Builder to the Province in respect of each Payment Period simultaneously with the delivery of the report delivered pursuant to Section 6.2 [Reports for Performance Incentive Payments] for such Payment Period (whether or not the Province has issued an invoice or demand therefor, provided that, if requested by the Design-Builder, the Province shall issue an invoice therefor as soon as reasonably practicable after the receipt of such request).
- (c) The Province and the Design-Builder acknowledge and agree that:
 - (i) there will be substantial delays, costs and difficulties in determining the loss suffered by the Province if the Substantial Completion Date does not occur on or before the Substantial Completion Target Date;
 - (ii) the Delay Liquidated Damages provided for in Section 3.2(a) of this Schedule are not intended, nor shall they be construed, to be punitive but are a genuine pre-estimate and assessment, by mutual agreement, of the actual loss that will be suffered by the Province as a result of the Substantial Completion Date not occurring on or before the Substantial Completion Target Date, and are payable by the Design-Builder as liquidated damages and not as a penalty; and
 - (iii) the method of calculation of Delay Liquidated Damages in accordance with Section 3.2(a) of this Schedule represents a fair and reasonable pre-estimate of the actual losses that will be suffered by the Province as a result of the Substantial Completion Date not occurring on or before the Substantial Completion Target Date.
- (d) The payment of Delay Liquidated Damages in accordance with this Section 3.2 shall be the Province’s sole remedy if the Substantial Completion Date does not occur on or before the Substantial Completion Target Date, provided that the payment of such Delay Liquidated Damages shall not, and shall not be construed to:

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- (i) limit the rights and remedies of the Province, or the liabilities of the Design-Builder, that arise or may arise as a result of the occurrence of the Design-Builder Default referred to in Section 12.1(o); nor
- (ii) relieve the Design-Builder from:
 - (A) the obligation to achieve Substantial Completion in accordance with this Agreement; or
 - (B) any liability arising from any failure to comply with any obligation referred to in Section 3.2(d)(ii)(A) of this Schedule, other than any liability that would arise as a result of the Substantial Completion Date not occurring on or before the Substantial Completion Target Date (except for the payment of Delay Liquidated Damages).
- (e) Section 10.4 [Province's Right of Set-Off] shall apply to the Design-Builder's obligation to pay Delay Liquidated Damages pursuant to this Section 3.2.

**PART 4
CALCULATION OF PERFORMANCE INCENTIVE PAYMENTS**

4.1 Calculation of Performance Incentive Payments

The Performance Incentive Payment in respect of Payment Period p (or part of Payment Period p , as the case may be) in Contract Year n during the period described in Section 3.1(a) of this Schedule shall be determined in accordance with the following formula:

$$PIP_{pn} = TMP_{pn} + NCEP_{pn}$$

where:

PIP_{pn} = the Performance Incentive Payment in respect of Payment Period p (or part of Payment Period p , as the case may be) in Contract Year n during the period described in Section 3.1(a) of this Schedule

TMP_{pn} = the Traffic Management Payment payable in respect of Payment Period p (or part of Payment Period p , as the case may be) in Contract Year n during the period described in Section 3.1(a) of this Schedule, determined in accordance with Section 4.2 [Calculation of Traffic Management Payments] of this Schedule

$NCEP_{pn}$ = the Non-Compliance Event Payment payable in respect of Payment Period p (or part of Payment Period p , as the case may be) in Contract Year n during the period described in Section 3.1(a) of this Schedule, determined in accordance with Section 4.3 [Calculation of Non-Compliance Event Payments] of this Schedule

4.2 Calculation of Traffic Management Payments

- (a) Subject to Sections 4.2(d), (e), (f), (g) and (h) of this Schedule, the amount of the Traffic Management Payment payable in respect of each Payment Period p (or part of Payment Period p , as the case may be) in Contract Year n in respect of which a Performance

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Incentive Payment is payable in accordance with Section 3.1 [Obligation to make Performance Incentive Payments] of this Schedule shall be determined in accordance with the following formula:

$$TMP_{pn} = \sum_{i=1}^I \text{TrafficManagementAmount}_i$$

where:

I = the number of Non-Permitted Traffic Disruption Events occurring in Payment Period *p* (or part of Payment Period *p*, as the case may be) in Contract Year *n* during the period described in Section 3.1(a) of this Schedule

Traffic Management Amount_i = the Traffic Management Amount in respect of Non-Permitted Traffic Disruption Event *i*, calculated in accordance with Section 4.2(b) of this Schedule

- (b) The Traffic Management Amount in respect of Non-Permitted Traffic Disruption Event *i* shall be determined in accordance with the following formula:

$$\text{TrafficManagementAmount}_i = LTDE_i \times DTDE_i \times [TDECC_i]$$

where:

LTDE_i = the aggregate number of lanes closed by Non-Permitted Traffic Disruption Event *i* in any of Highway 91, Highway 17, Highway 99, Highway 91C, Interchange Ramps, Other Specified Roads and River Road

DTDE_i = the duration (in minutes) of Non-Permitted Traffic Disruption Event *i*

TDECC_i = the Traffic Disruption Event Charge in respect of Non-Permitted Traffic Disruption Event *i*, determined in accordance with Section 4.2(c) of this Schedule

- (c) The Traffic Disruption Event Charge for any Non-Permitted Traffic Disruption Event *i* shall be calculated with reference to the applicable Traffic Disruption Event Charge Lookup Table below, using the relevant part of the table for the period during which Non-Permitted Traffic Disruption Event *i* occurs:

Traffic Disruption Event Charge Lookup Table (TDCC_i)				
Traffic Disruption Event Charge (per minute, per lane)				
Duration of Non-Permitted Traffic Disruption Event <i>i</i>	Period during which Non-Permitted Traffic Disruption Event <i>i</i> occurs			
	≥ 2 years prior to Substantial Completion Target Date	< 2 years and ≥ 1 year prior to Substantial Completion Target Date	< 1 year prior to Substantial Completion Target Date*	After Substantial Completion Date
First 15 minutes				
Next 45 minutes after the first 15 minutes				
Next 60 minutes after the first 60 minutes				
After the first 120 minutes				

* If Substantial Completion is not achieved by the Substantial Completion Target Date, the Traffic Disruption Event Charges set out in this column will also apply during the period from (and including) the Substantial Completion Target Date until (and including) the Substantial Completion Date.

- (d) If a Non-Permitted Traffic Disruption Event affects more than one lane of any of the Highway 91, Highway 17, Highway 99, Highway 91C, an Interchange Ramp, an Other Specified Road or River Road, and the duration of the Non-Permitted Traffic Disruption Event in respect of each such lane is different, the Traffic Management Amount in respect of the Non-Permitted Traffic Disruption Event shall be calculated separately for each such lane pursuant to Section 4.2(b) of this Schedule.
- (e) If the occurrence of a Non-Permitted Traffic Disruption Event is first identified and reported by the Province and the Province, acting reasonably, considers that the Design-Builder ought to have identified and reported the occurrence of the Non-Permitted Traffic Disruption Event before the Province did so, then the Traffic Management Amount in respect of that Non-Permitted Traffic Disruption Event shall be multiplied by a factor of two.
- (f) No Traffic Management Amount is payable in respect of a Non-Permitted Traffic Disruption Event that is the direct result of:
 - (i) an Excluded Event;
 - (ii) a Relief Event; or
 - (iii) a Force Majeure Event.
- (g) A Non-Permitted Traffic Disruption Event the occurrence of which spans portions of:
 - (i) two or more Payment Periods during the Term; or
 - (ii) two or more periods described in the applicable Traffic Disruption Event Charge Lookup Table set out in Section 4.2(c) of this Schedule,

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shall be treated as a new Non-Permitted Traffic Disruption Event for each successive Payment Period or period, as the case may be, that commences while the Non-Permitted Traffic Disruption Event is continuing (with the Traffic Disruption Event Charge applicable to each such successive Payment Period or period, as the case may be, determined with reference to the applicable Traffic Disruption Charge Look-up Table set out in Section 4.2(c) of this Schedule, applying accordingly).

- (h) Despite anything else in this Section 4.2, and without limiting the generality of Section 18.6 [Waiver], the Province expressly reserves the right to waive, reduce or defer the obligation to pay, any Traffic Management Amount otherwise payable pursuant to Section 4.2(a) of this Schedule in respect of a Non-Permitted Traffic Disruption Event, as such Traffic Management Amount is calculated in accordance with Section 4.2(b) of this Schedule, and the Province may do so in its sole and absolute discretion and without prejudice to any of its rights and remedies (whether pursuant to this Schedule or otherwise) in respect of any other Non-Permitted Traffic Disruption Event. Any such waiver, reduction or deferral by the Province of any Traffic Management Amount shall only be effective if in writing signed by the Province, and shall not excuse the Design-Builder from performing, nor otherwise affect the Design-Builder’s obligation to perform, all of its obligations under this Agreement. For certainty, no interest shall be payable by the Design-Builder in respect of any Traffic Management Amount that is deferred by the Province under this Section 4.2(h).

4.3 Calculation of Non-Compliance Event Payments

- (a) At all times during the period described in Section 3.1(a) of this Schedule, the amount of the Non-Compliance Event Payment payable by the Design-Builder in respect of each Payment Period *p* (or portion thereof, as the case may) in Contract Year *n* in respect of which a Performance Incentive Payment is payable in accordance with Section 3.1 [Obligation to make Performance Incentive Payments] of this Schedule shall be determined in accordance with the following formula:

$$NCEP_{pn} = \sum_{d=1}^D NCEPP_d + \sum_{d=1}^D NCEP_d$$

where:

NCEPP_d = the NCE (Points) Payment in respect of day *d* of Payment Period *p* (or part of Payment Period *p*, as the case may be) in Contract Year *n*, calculated as follows:

\$1,000 x [the greater of (i) (NCE Points_d – 15) and (ii) 0]

where:

NCE Points_d = the NCE Points Balance on day *d*

NCECP_d = the NCE (Cash) Payment in respect of day *d* of Payment Period *p* (or part of Payment Period *p*, as the case may be) in Contract Year *n*

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D = the number of days in Payment Period *m* (or part of Payment Period *m*, as the case may be) in Contract Year *n*

- (b) Despite anything else in this Section 4.3, and without limiting the generality of Section 18.6 [Waiver], the Province expressly reserves the right to waive, reduce or defer the obligation to pay, all or any portion of any Non-Compliance Event Payment otherwise payable pursuant to Section 4.3(a) of this Schedule in respect of any Non-Compliance Event(s), as such Non-Compliance Event Payment (or portion thereof, as the case may be) is calculated in accordance with Section 4.3(a) of this Schedule, and the Province may do so in its sole and absolute discretion and without prejudice to any of its rights and remedies (whether pursuant to this Schedule or otherwise) in respect of any other Non-Compliance Event. Any such waiver, reduction or deferral by the Province of any Non-Compliance Event Payment (or portion thereof, as the case may be) shall only be effective if in writing signed by the Province, and shall not excuse the Design-Builder from performing, nor otherwise affect the Design-Builder's obligation to perform, all of its obligations under this Agreement. For certainty, no interest shall be payable by the Design-Builder in respect of any Non-Compliance Event Payment that is deferred by the Province under this Section 4.3(b).

4.4 No Set Off re Performance Incentive Payments

No amount that may from time to time be or become owing by the Province to the Design-Builder under this Agreement may be set off against any amount payable by the Design-Builder to the Province in respect of any obligation of the Design-Builder to pay Performance Incentive Payments pursuant to this Schedule.

DIVISION III **GENERAL PROVISIONS**

PART 5 **NCE POINTS AND DEFAULT POINTS**

5.1 Assignment of NCE Points

- (a) Upon any occurrence of a Non-Compliance Event, whether such occurrence is first identified and reported to the other party by the Design-Builder or the Province, NCE Points shall be assigned by the Province on the basis set out in Appendix D [Assignment of NCE Points] to this Schedule and in accordance with this Section 5.1.
- (b) If the occurrence of a Non-Compliance Event is first identified and reported by the Province and the Province, acting reasonably, considers that the Design-Builder ought to have identified and reported the occurrence of the Non-Compliance Event before the Province did so, the Province may assign one additional NCE Point in respect of that Non-Compliance Event.
- (c) If the Province first discovers a Nonconformity (other than a Non-Compliance Event) and issues a Nonconformity Report in respect thereof in accordance with Section 6.1 [Nonconformity Report Process] of Schedule 7, and the Province, acting reasonably, considers that the Design-Builder ought to have discovered and issued a Nonconformity Report in respect of the Nonconformity before the Province did so, then, if pursuant to the

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provisions of Part 5 [NCE Points and Default Points] of this Schedule (other than this Section 5.1(c)), the Nonconformity:

- (i) has, or would have but for its rectification, become a Non-Compliance Event, then the Province may assign one additional NCE Point in respect thereof; or
 - (ii) has not, or would not have, become a Non-Compliance Event, then the Province may assign one NCE Point in respect thereof.
- (d) No NCE Points shall be assigned by the Province in respect of a Non-Compliance Event that is the direct result of a Province Non-Excusable Event.
- (e) No NCE Points shall be assigned by the Province in respect of the occurrence of a Non-Compliance Event that results in a NCE (Cash) Payment.
- (f) If, after the date of occurrence of a Non-Compliance Event (other than a Non-Compliance Event that has been identified as a result of a traffic management audit process conducted pursuant to Section 4.8 [Traffic Management Auditing] of Schedule 7), such Non-Compliance Event subsists for a period of 28 calendar days, then (in addition to any NCE Points assigned upon the initial occurrence of the Non-Compliance Event) the applicable number of NCE Points shall thereupon again be assigned by the Province in respect of that Non-Compliance Event.

For each successive 28 calendar day period that such Non-Compliance Event subsists, the applicable number of NCE Points shall again be assigned by the Province in respect of that Non-Compliance Event, so that the aggregate number of NCE Points outstanding in respect of that Non-Compliance Event at any time shall be determined by application of the following formula:

$$\text{NCE Points outstanding in respect of any subsisting Non-Compliance Event} = \text{Points} \times (1 + \text{Compounding Periods})$$

where:

Points = the number of NCE Points applicable to the Non-Compliance Event, as assigned by the Province on the basis set out in Appendix D [Assignment of NCE Points] to this Schedule and in accordance with this Section 5.1 (including in accordance with Section 5.1(b) of this Schedule).

Compounding Periods = the total number of successive 28 calendar day periods having elapsed since the date of initial occurrence of the Non-Compliance Event, as at the date of determination of the number of NCE Points outstanding.

- (g) Despite anything else in this Section 5.1, the Province expressly reserves the right to refrain from, or to defer, assigning all or any portion of the NCE Points set out in Appendix D [Assignment of NCE Points] to this Schedule in respect of any Non-Compliance Event, and the Province may do so in its sole and absolute discretion and without prejudice to any of its other available rights and remedies in respect of that Non-Compliance Event, and without prejudice to its right to assign NCE Points, and to exercise any of its other available

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rights and remedies, in respect of any other Non-Compliance Event. Any such refraining from or deferral of assigning any NCE Points by the Province shall only be effective if in writing signed by the Province, and shall not excuse the Design-Builder from performing, nor otherwise affect the Design-Builder's obligation to perform, all of its obligations under this Agreement.

- (h) The Province shall notify the Design-Builder of the assignment by the Province of any NCE Points pursuant to this Section 5.1 promptly after such assignment.
- (i) The Design-Builder shall be entitled to dispute the assignment of any NCE Points only if:
 - (i) the number of such NCE Points assigned by the Province pursuant to Section 5.1(a) of this Schedule in respect of a Non-Compliance Event is greater than the number of NCE Points identified by the Design-Builder in the relevant monthly report delivered under Part 6 [Periodic Reports and Payment Applications] of this Schedule as being assignable in respect of that Non-Compliance Event; or
 - (ii) it is disputing the reasonableness of the Province's determination pursuant to Sections 5.1(b) or 5.1(c) of this Schedule; and
 - (iii) the Design-Builder refers any such dispute referred to in Section 5.1(i)(i) or (ii) of this Schedule to the Dispute Resolution Procedure within 14 days after its receipt from the Province of notice of such assignment. If the Design-Builder does not refer the dispute to the Dispute Resolution Procedure within such 14-day period, the Design-Builder shall be deemed to have accepted the Province's assignment of the relevant NCE Points.
- (j) The assignment of NCE Points as contemplated by this Section 5.1 is in addition to and not in substitution for or to the exclusion of any other rights and remedies available to the Province under this Agreement or any of the other Project Documents or at law or in equity, and the Province may have recourse to any one or more of all of such rights and remedies, concurrently or successively, as it shall see fit, without prejudice to any of its other available rights and remedies.

5.2 Calculation of NCE Points Balance

- (a) For purposes of Section 4.3 [Calculation of Non-Compliance Event Payments] of this Schedule:
 - (i) NCE Points that have been assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule (other than as a result of a traffic management audit process conducted pursuant to Schedule 4.8 [Traffic Management Auditing] of Schedule 7) shall subsist for the duration of the period from the date of occurrence of the Non-Compliance Event in respect of which such NCE Points have been assigned until the date on which the status of the Nonconformity Report in respect of such Non-Compliance Event is changed to "pending" in accordance with Section 6.1 [Nonconformity Reporting Process] of Schedule 7 (which period shall not, in any event, be less than one calendar day), whereupon such NCE Points shall be deducted from the then current NCE Points Balance;

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- (ii) NCE Points that have been assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule as a result of a traffic management audit process conducted pursuant to Section 4.8 [Traffic Management Auditing] of Schedule 7 shall subsist until 11:59 pm on the date of occurrence of the Non-Compliance Event in respect of which such NCE Points have been assigned (and shall be included in the calculation of the NCE Points Balance as at any time on that date after their assignment), whereupon such NCE Points shall be deducted from the then current NCE Points Balance; and
 - (iii) for certainty, any NCE Points assigned as contemplated in Section 5.2(a)(i) of this Schedule shall be included in the calculation of the NCE Points Balance as at any time on the date of their assignment and in the calculation of the NCE Points Balance as at any time on each day thereafter during the applicable period until (and including) the date of their deduction from the NCE Points Balance in accordance with Section 5.2(a)(i) of this Schedule.
- (b) At all times during period from the Effective Date until the Total Completion Date, each of the Province and the Design-Builder shall respectively maintain a record of:
- (i) the aggregate number of NCE Points assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule at any time during the period from the Effective Date until such time; and
 - (ii) the aggregate number of NCE Points assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule at any time during the period from the Effective Date until such time, which NCE Points are still outstanding as at such time as determined pursuant to Section 5.2(a) of this Schedule (the “**NCE Points Balance**”).

5.3 Calculation of NCE Points (Default) Balance

- (a) For purposes of Section 5.4 [Assignment of Default Points] of this Schedule, NCE Points that have been assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule shall subsist for the duration of the period from the date of occurrence of the Non-Compliance Event in respect of which such NCE Points have been assigned until the earlier of:
- (i) the date on which the Province assigns one or more Default Points in respect of such NCE Points pursuant to Section 5.4(a) of this Schedule; and
 - (ii) the end of the Contract Year in which such NCE Points were assigned;
- whereupon such NCE Points shall be deducted from the then current NCE Points (Default) Balance.
- (b) At all times during the period from the Effective Date until the Total Completion Date, the Province shall maintain a record of the aggregate number of NCE Points assigned pursuant to Section 5.1 [Assignment of NCE Points] of this Schedule at any time during the period from the commencement of the then current Contract Year until such time, which NCE

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Points are still outstanding as at such time as determined pursuant to Section 5.3(a) of this Schedule (the “**NCE Points (Default) Balance**”).

5.4 Assignment of Default Points

Default Points shall be assigned to the Design-Builder on the basis set out in this Section 5.4.

- (a) For each 150 NCE Points assigned to the Design-Builder during a Contract Year the Province shall assign to the Design-Builder one Default Point. Upon any such assignment of a Default Point, the then current NCE Points (Default) Balance shall be reduced by 150 NCE Points.
- (b) If the Design-Builder fails to perform or observe any of its material obligations under this Agreement (other than its obligations referred to in Section 5.4(c) of this Schedule, but including Indigenous Requirements) then the Province may, in its discretion, assign to the Design-Builder up to a maximum of 5 Default Points for each such failure.
- (c) If there occurs:
 - (i) a Nonconformity in respect of a Quality Audit of the Quality Management System, and such Nonconformity is not remedied within the required time set out in the relevant Nonconformity Report;
 - (ii) a Nonconformity in respect of a Quality Audit of the Quality Management System that relates to a requirement in respect of which a Nonconformity has occurred previously (a “**Repeat Nonconformity**”), whether or not such Repeat Nonconformity is remedied;
 - (iii) any failure by the Design-Builder to perform or observe any of its obligations under, or otherwise to comply with, the OEEA or the Environmental Assessment Certificate;
 - (iv) a Nonconformity in respect of performance measure PE3.4(a) [Notification to Province] in Schedule 6;
 - (v) a Nonconformity in respect of performance measure PE3.5(a) [Notification to Environmental Authorities] in Schedule 6; or
 - (vi) any failure by the Design-Builder to comply with Section 1.3(o) of Part 4 [Traffic Management] of Schedule 4,then the Province may, in its discretion, assign to the Design-Builder up to a maximum of 3 Default Points for each such Nonconformity, Repeat Nonconformity or failure to comply, as the case may be.
- (d) Once assigned pursuant to this Section 5.4, Default Points shall subsist for the remainder of the period ending on the Total Completion Date (but, for the purposes of Section 5.4(e)(ii) of this Schedule, shall be in effect only for the period of three years from the date of their assignment).

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- (e) At all times during the period from the Effective Date until the Total Completion Date, the Province shall maintain a record of
 - (i) the aggregate number of Default Points assigned pursuant to this Section 5.4 at any time during the period from the Effective Date until such time; and
 - (ii) the aggregate number of Default Points assigned pursuant to this Section 5.4 at any time during the period from (but excluding) the date that is three years prior to such time until such time (the “**Default Points Balance**”).
- (f) The Province shall notify the Design-Builder of the assignment of any Default Points pursuant to this Section 5.4 promptly after such assignment.
- (g) The Design-Builder shall be entitled to dispute the assignment of any Default Point only if:
 - (i) the number of such Default Points assigned by the Province in respect of any month is greater than the number of Default Points identified by the Design-Builder in the relevant monthly report delivered under Part 6 [Periodic Reports and Payment Applications] of this Schedule as being assignable in respect of that month; and
 - (ii) the Design-Builder refers such dispute to the Dispute Resolution Procedure within 14 days after its receipt from the Province of notice of such assignment. If the Design-Builder does not refer the dispute to the Dispute Resolution Procedure within such 14-day period, the Design-Builder shall be deemed to have accepted the Province’s assignment of the relevant Default Points.
- (h) The Province’s right to assign Default Points as contemplated by this Section 5.4 is in addition to and not in substitution for or to the exclusion of any other rights and remedies available to the Province under this Agreement or any of the other Project Documents or at law or in equity, and the Province may have recourse to any one or more or all of such rights and remedies, concurrently or successively, as it shall see fit, without prejudice to any of its other available rights and remedies.

PART 6
PERIODIC REPORTS AND PAYMENT APPLICATIONS

6.1 Draw Requests for Progress Payments

- (a) On or before three Business Days following the last day of each Payment Period, the Design-Builder shall prepare and deliver to the Province’s Representative and the Independent Engineer a statement of progress in respect of the Payment Period then most recently having ended, substantially in the form set out in Appendix A [Form of Statement of Progress] to this Schedule, duly completed in accordance with Appendix B [Progress Measurement Principles] of this Schedule (a “**Statement of Progress**”) and accompanied by work papers clearly setting forth the derivation of all percentages and dollar amounts required by Appendix A to be included therein. Prior to delivering a Draw Request to the Province’s Representative pursuant to Section 6.1(b) of this Schedule, the Design-Builder shall arrange with the Province’s Representative and the Independent Engineer a

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reasonable opportunity for the Province's Representative and the Independent Engineer jointly with the Design-Builder to inspect the Project Work and review the Statement of Progress and to attend at the offices of the Design-Builder to review such documentation as the Province's Representative or the Independent Engineer may request.

- (b) On or before five Business Days following the last day of each Payment Period, the Design-Builder shall prepare and deliver to the Province's Representative a draw request substantially in the applicable form set out in Appendix E [Payment Application Forms] to this Schedule, and a Statement of Progress duly certified by the Independent Engineer and accompanied by work papers clearly setting forth the derivation of the percentages and dollar amounts required by Appendix A to be included therein, each for the Progress Payment for the portion of the Project Work progressed during the Payment Period then most recently ended and accompanied by the documentation specified therein (such draw request and certified Statement of Progress, together being a "**Draw Request**").
- (c) The Draw Request shall set out the Design-Builder's calculation of each of the following (each stated separately, without duplication):
 - (i) the Cost Item Progress Amount in respect of each relevant Cost Item in respect of such Payment Period (each such amount as set out in the applicable certified Statement of Progress comprising part of such Draw Request);
 - (ii) the cumulative total progress made by the Design-Builder, during all Payment Periods up to and including such Payment Period, toward completion of each relevant Cost Item, expressed as a percentage (each such percentage amount as set out in the applicable certified Statement of Progress comprising part of such Draw Request);
 - (iii) the cumulative total progress made by the Design-Builder, during all Payment Periods up to but excluding such Payment Period, toward completion of each relevant Cost Item, expressed as a percentage (each such percentage amount as set out in the applicable certified Statement of Progress comprising part of such Draw Request);
 - (iv) the Relevant Completion Percentage applicable to each relevant Cost Item in respect of such Payment Period (each such percentage amount as set out in the applicable certified Statement of Progress comprising part of such Draw Request);
 - (v) the Progress Amount in respect of such Payment Period;
 - (vi) the Cost Item Progress Amount in respect of each Specified Cost Item, which amount is determined in accordance with Section 2.1(b) of this Schedule to be payable in respect of such Payment Period (each such amount as set out in the applicable certified Statement of Progress comprising part of such Draw Request);
 - (vii) the aggregate of all Cost Item Progress Amounts in respect of all Specified Cost Items, each of which is determined in accordance with Section 2.1(b) of this Schedule to be payable in respect of such Payment Period;

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- (viii) the amount of any amount payable for such Payment Period in respect of previous Progress Payments Holdbacks pursuant to Section 2.1(a)(iii) of this Schedule;
 - (ix) the amount of any holdback on account of the Progress Payment Holdback to be made for such Payment Period pursuant to Section 2.1(a)(iv) of this Schedule;
 - (x) the amount of any holdback on account of the Warranty Holdback to be made for such Payment Period pursuant to Section 2.1(a)(v) of this Schedule;
 - (xi) the amount of any holdback on account of the Deficiency Holdback to be made for such Payment Period pursuant to Section 2.1(a)(vi) of this Schedule;
 - (xii) the total Progress Payment payable in respect of such Payment Period, determined pursuant to Section 2.1(a) of this Schedule;
 - (xiii) the aggregate of all amounts payable in respect of:
 - (A) any additional or varied Project Work authorized or approved by a Change Certificate issued pursuant to Part 2 [Province Changes] of Schedule 11 and performed by the Design-Builder during such Payment Period; and
 - (B) any Minor Works performed by the Design-Builder pursuant to Section 1.2(a) of Schedule 11 [Changes] during such Payment Period;
 - (xiv) any applicable taxes payable in respect of any of the payments referred to above in this Section 6.1(c);
 - (xv) any adjustments to reflect over-payments and/or underpayments (each such adjustment stated separately) in respect of Progress Payments made by the Province during the period prior to such Payment Period (for which adjustment has not already been made, including by way of determination of a negative Relevant Completion Percentage applicable to any Cost Item);
 - (xvi) any interest payable in respect of any amounts owed; and
 - (xvii) the net amount owing by the Province to the Design-Builder or by the Design-Builder to the Province in respect of the Province's obligation to make Progress Payments pursuant to Section 1.1 [Obligation to make Progress Payments] of this Schedule and to make payment for additional or varied Project Work performed by the Design-Builder pursuant to a Change Certificate issued pursuant to Part 2 [Province Changes] of Schedule 11 or for Minor Works performed by the Design-Builder pursuant to Section 1.2(a) of Schedule 11 Changes.
- (d) The Draw Request shall be accompanied by work papers clearly setting forth the derivation of the percentages and amounts set out therein in accordance with all applicable calculations specified in this Schedule. Such work papers shall include all relevant reports, information and documentation (all in such form and content as is acceptable to the Province's Representative) to support the Design-Builder's application contained in such Draw Request.

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- (e) The Draw Request shall be accompanied by a letter from the Workers' Compensation Board which confirms that the Design-Builder is in good standing with the Workers' Compensation Board and that all required remittances and assessments required by the WCA have been made to a date which is no more than three Business Days prior to the date of the Draw Request.
- (f) The Draw Request shall be accompanied by a report on the status of the Project, which report shall include:
 - (i) a description of (A) the Design-Builder's progress during the Payment Period to which the Draw Request relates, (B) the Design-Builder's progress to date in relation to the Works Schedule and (C) the major activities performed by the Design-Builder during the Payment Period; and
 - (ii) a look-ahead work plan for the three months following the Payment Period to which the Draw Request relates.
- (g) The Draw Request shall (subject to any exceptions set out in such Draw Request) constitute a representation and warranty by the Design-Builder to the Province (the truth and accuracy of which representation and warranty shall be a condition precedent to the obligation of the Province to make any payment pursuant to the Draw Request, and which representation and warranty may, as to the payment of any Subcontractors as described in Section 6.1(g)(iv) below, be made in reliance on one or more statutory declarations of others) that:
 - (i) the Project Work has progressed to the point indicated in the Draw Request;
 - (ii) the Cost Item Progress Amounts identified in the Draw Request have been properly incurred;
 - (iii) the Project Work described in the Draw Request as having been done, has been done in accordance with the Design-Builder's obligations under this Agreement;
 - (iv) all of the Subcontractors have been paid in full up to the last Progress Payment received by the Design-Builder, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and the *Builders Lien Act* (British Columbia), if applicable;
 - (v) except to the extent communicated by the Design-Builder to the Province in writing, no Adverse Claim exists with respect to or as a result of or in relation to the Project Work;
 - (vi) the Design-Builder is entitled to payment in the amount requested;
 - (vii) no the Design-Builder Default has occurred which has not been either waived in writing by the Province or remedied to the satisfaction of the Province;
 - (viii) there has not been any material adverse change in the Design-Builder's ability to perform its obligations under this Agreement; and

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- (ix) to the best of the Design-Builder's knowledge, there has not been any materially adverse change in any Subcontractor's ability to perform its obligations under the applicable Subcontract.
- (h) The Province's Representative shall identify any deficiencies or inaccuracies in the Draw Request and the amount affected thereby within five Business Days of the Draw Request being delivered pursuant to Section 6.1(b) of this Schedule, which amount shall be subject to Section 10.8 [Payment of Disputed Amounts].
- (i) The Design-Builder shall cooperate with the Province's Representative to reach agreement on a Draw Request on or before the fifth Business Day following delivery of the Draw Request to the Province's Representative pursuant to Section 6.1(b) of this Schedule.
- (j) The Province's Representative shall approve the Draw Request as to amounts not in dispute, and pay to the Design-Builder such amounts not in dispute, within five Business Days of the Draw Request being delivered pursuant to Section 6.1(b) of this Schedule.
- (k) The Draw Request, once agreed upon pursuant to Section 6.1(i) of this Schedule, shall not be amended except in writing signed by each of the parties.

6.2 Reports for Performance Incentive Payments and Delay Liquidated Damages

- (a) Not later than 10 days after the last day of each Payment Period (or part thereof, as the case may be) in each Contract Year during the period described in Section 3.1(a) of this Schedule, the Design-Builder shall deliver to the Province's Representative a written report setting out the Design-Builder's calculation of the payments payable by it in respect of that Payment Period (or part thereof, as the case may be) in accordance with Section 3.1 [Obligation to make Performance Incentive Payments] and Section 3.2 [Obligation to pay Delay Liquidated Damages] of this Schedule. Specifically, the report shall show the Design-Builder's calculation of each of the following (each stated separately):
 - (i) any Performance Incentive Payment payable in respect of that Payment Period (or part thereof, as the case may be);
 - (ii) any Traffic Management Payment payable in respect of that Payment Period (or part thereof, as the case may be);
 - (iii) any Non-Compliance Event Payment payable in respect of that Payment Period (or part thereof, as the case may be);
 - (iv) any Delay Liquidated Damages payable in respect of that Payment Period (or part thereof, as the case may be);
 - (v) any NCE Points assignable to the Design-Builder in respect of each Non-Compliance Event occurring during that Payment Period (or part thereof, as the case may be) (which shall be the number of NCE Points set out in Appendix D [Assignment of NCE Points] to this Schedule in respect of such Non-Compliance Event), and the total of all such NCE Points;

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- (vi) the NCE Points Balance as at the end of each day of that Payment Period (or part thereof, as the case may be);
 - (vii) the NCE Points (Default) Balance as at the end of each day of that Payment Period (or part thereof, as the case may be);
 - (viii) the total of all Default Points assignable to the Design-Builder during that Payment Period (or part thereof, as the case may be) (which shall be the aggregate Default Points assignable to the Design-Builder in accordance with Section 5.4 [Assignment of Default Points] of this Schedule);
 - (ix) the Default Points Balance as at the end of each day of that Payment Period (or part thereof, as the case may be);
 - (x) any applicable taxes payable in respect of any of the payments referred to in paragraphs (i) through (iv) above in respect of that Payment Period (or part thereof, as the case may be);
 - (xi) any adjustments to reflect over-payments and/or underpayments (each such adjustment stated separately) in respect of Performance Incentive Payments made by the Design-Builder during the period prior to that Payment Period (for which adjustment has not already been made);
 - (xii) any interest payable in respect of any amounts owed; and
 - (xiii) the net amount owing by the Design-Builder to the Province or by the Province to the Design-Builder in respect of the Design-Builder's obligation to make Performance Incentive Payments and pay Delay Liquidated Damages pursuant to Sections 3.1 [Obligation to make Performance Incentive Payments] and 3.2 [Obligation to pay Delay Liquidated Damages], respectively, of this Schedule.
- (b) A report delivered pursuant to this Section 6.2 shall be accompanied by work papers clearly setting forth the derivation of the amounts set out therein in accordance with all applicable calculations specified in this Schedule. Such work papers shall include all relevant reports, information and documentation (all in such form and content as is acceptable to the Province's Representative) to support the Design-Builder's calculation of the relevant Performance Incentive Payment and Delay Liquidated Damages, as applicable.
- (c) The Design-Builder's obligation to deliver a written report pursuant to this Section 6.2 shall not affect the Design-Builder's obligation to deliver any other written report pursuant to any other section of this Part 6.

6.3 Province can issue Reports and Invoices

If the Design-Builder fails to deliver any report or invoice within the time period required pursuant to this Schedule, the Province may itself prepare and deliver to the Design-Builder such report or invoice. Any such report or invoice delivered pursuant to this Section 6.3 shall be accompanied by work papers clearly setting forth the derivation of the amounts set out therein in accordance with all applicable calculations specified in this Schedule.

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6.4 Quarterly Forecast of Progress Payments

Not later than 10 days after the first day of each Fiscal Quarter (or part thereof, as the case may be) (the “**Current Fiscal Quarter**”) during the period from the Effective Date until the Total Completion Date, the Design-Builder shall deliver to the Province’s Representative a forecast of:

- (a) the cumulative total of all Progress Payments to be paid in respect of the Current Fiscal Quarter;
- (b) the cumulative total of all Progress Payments to be paid in respect of all Fiscal Quarters (or part thereof, as the case may be), if any, remaining in the then-current Fiscal Year after the Current Fiscal Quarter; and
- (c) the cumulative total of all Progress Payments to be paid in respect of each Fiscal Year (or part thereof) following the then-current Fiscal Year and commencing before the later of (i) the Total Completion Target Date and (ii) the Total Completion Date.

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Each Relevant Completion Percentage shall be calculated to 2 decimal places, and each Cost Item Progress Amount shall be calculated to the nearest dollar.

Table A1 – Cost Item Progress Amounts (excluding in relation to Specified Cost Items)

	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	Total progress (%)	Total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D – B
1. Project Management								
1.1	project management							
2. Mobilization								
2.1	mobilization							
3. Design								
3.1	Design development							
3.2	Final Design							
4. Construction								
4.1 Construction – River Road/Highway 17 Interchange								
4.1a	roadworks – preload							
4.1b	roadworks – GMTR preload							
4.1c	roadworks – grading							
4.1d	roadworks – landscaping							

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	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	Total progress (%)	Total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D – B
4.1e	roadworks – utilities							
4.1f	roadworks – drainage							
4.1g	roadworks – paving							
4.1h	electrical/ITS & lighting							
4.1i	Structures – Foundations							
4.1j	Structures – Substructures							
4.1k	Structures – Superstructure – solid or framed Structure							
4.1l	Structures – Superstructure – structural Deck slab							
4.1m	Structures – guide signs							
4.2 Construction – Highway 91C/17 Interchange								
4.2a	roadworks – preload							
4.2b	roadworks – GMTR preload							
4.2c	roadworks – grading							
4.2d	roadworks – landscaping							
4.2e	roadworks – utilities							

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	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	Total progress (%)	Total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D – B
4.2f	roadworks – drainage							
4.2g	roadworks – paving							
4.2h	electrical/ITS & lighting							
4.2i	Structures – Foundations							
4.2j	Structures – Substructures							
4.2k	Structures – Superstructure – solid or framed Structure							
4.2l	Structures – Superstructure – structural Deck slab							
4.2m	Structures – guide signs							
4.3 Construction – Highway 91C/Weigh Scale Interchange								
4.3a	roadworks – preload							
4.3b	roadworks – GMTR preload							
4.3c	roadworks – grading							
4.3d	roadworks – landscaping							
4.3e	roadworks – utilities							
4.3f	roadworks – drainage							

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	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	Total progress (%)	Total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D - B
4.3g	roadworks – paving							
4.3h	electrical/TTS & lighting							
4.3i	Structures – Foundations							
4.3j	Structures – Substructures							
4.3k	Structures – Superstructure – solid or framed Structure							
4.3l	Structures – Superstructure – structural Deck slab							
4.3m	Structures – guide signs							
4.4 Construction – Nordel Way/Highway 91 Interchange								
4.4a	roadworks – preload							
4.4b	roadworks – GMTR preload							
4.4c	roadworks – grading							
4.4d	roadworks – landscaping							
4.4e	roadworks – utilities							
4.4f	roadworks – drainage							
4.4g	roadworks – paving							

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	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	Total progress (%)	Total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D - B
4.4h	electrical/ITS & lighting							
4.4i	Structures – Foundations							
4.4j	Structures – Substructures							
4.4k	Structures – Superstructure – solid or framed Structure							
4.4l	Structures – Superstructure – structural Deck slab							
4.4m	Structures – guide signs							
4.4n	Structures – removals							
4.4o	Delta Nature Reserve Boardwalk							
Total		[Contract Price less Cost Item Amounts in respect of Specified Cost Items]		[Sum of Column C]		[Sum of Column E]		[Sum of Column G]

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Table A2 – Specified Cost Items Completion Amounts

	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	total progress (%)	total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D – B
5. Specified Cost Items								
5.1	Construction Management Plan							
5.2	Design Management Plan							
5.3	Construction Environmental Management Plan							
5.4	Traffic Management Plan							
5.5	Quality Manual							
5.6	Design Quality Management Plan							
5.7	Construction Quality Management Plan							
5.8	Traffic Quality Management Plan							
5.9	Environmental Quality Management Plan							
5.10	Construction Communications and Engagement Plan							
5.11	Community Benefits Plan							
5.12	Apprenticeship and Skills Training Plan							

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	Cost Item	Cost Item Amount (\$nominal)	cumulative (EXCLUDING this Payment Period)		cumulative (INCLUDING this Payment Period)		this Payment Period	
			total progress (%)	total progress (\$)	total progress (%)	total progress (\$)	Relevant Completion Percentage	Cost Item Progress Amount
			A	B	C = A x B	D	E = A x D	F = D - B
5.13	Indigenous Participation Plan							
5.14	Operation and Maintenance Plan							
5.15	All deliverables pursuant to Part 1 [Deliverables for Substantial Completion] of Appendix A to Schedule 4							
5.16	All deliverables pursuant to Part 2 [Deliverables for Total Completion] of Appendix A to Schedule 4							
Total				[Sum of Column C]		[Sum of Column E]		[Sum of Column G]

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Total Progress Payment

1. Progress Amount _____
2. Aggregate of all Cost Item Amounts in respect of Specified Cost Items (total amount of column G of table 2) _____
3. Total Progress Payments _____

[Design-Builder's Representative's signature]

Certified Correct:

[Independent Engineer's signature]

SCHEDULE 10: PAYMENT AND PERFORMANCE MECHANISM

**APPENDIX B
PROGRESS MEASUREMENT PRINCIPLES**

A. Cost Items

- All Cost Items other than Specified Cost Items are identified in Column B of Table B-1 as set out below.
- All Specified Cost Items are identified in Column B of Table B-2 as set out below.

B. Descriptions

- Column C of each of Tables B-1 and B-2 set out below provides a summary description of the work included within each Cost Item. It is not intended that such description be a comprehensive and exhaustive statement of the Project Work to be carried out by the Design-Builder nor that such description describes the means or methods to be used by the Design-Builder in undertaking the Project Work or any part thereof.
- For certainty, any element of Project Work not referred to expressly in any such description in Column C of each of Tables B-1 and B-2 set out below, shall be deemed to be included in the relevant Cost Item.
- If the parties disagree as to which Cost Item includes a particular element of Project Work not referred to expressly in any such Cost Item description, then the determination of the Independent Engineer shall be final and binding on the parties.

C. Progress Measurement

- Column D of each of Tables B-1 and B-2 set out below sets out the principles that shall be used by the Design-Builder, the Province and the Independent Engineer to calculate total progress (calculated as a percentage) made by the Design-Builder toward completion of a Cost Item for the purpose of determining the Relevant Completion Percentage for that Cost Item for each Payment Period. The Statement of Progress included in the Draw Request in respect of each Payment Period, to be submitted by the Design-Builder in accordance with Section 6.1 [Draw Requests for Progress Payments] of Schedule 10, shall be completed in accordance with these principles.
- Specified Cost Items shall be considered to be 100% complete based on the principles included in Column D of Table B-2. Prior to 100% completion of a Specified Cost Item, the total progress of that Specified Cost Item shall be deemed to be 0%.
- If the Province, acting reasonably, determines that any particular progress measurement rule set out in Table B-1 or Table B-2 below for determining the progress made by the Design-Builder toward completion of a Cost Item results in an inaccurate calculation of the Design-Builder's actual progress in that regard, then the Province may revise such progress measurement rule.
- Any partial Payment Period shall be considered to be a complete Payment Period when calculating the total number of Payment Periods.

D. Cost Item Amount

- Column E of each of Tables B-1 and B-2 set out below sets out the Cost Item Amount allocated to each Cost Item.
- The aggregate of all Cost Item Amounts shall in no event exceed the Contract Price.

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TABLE B-1 COST ITEMS (excluding Specified Cost Items)

	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
1. Project management				
1.1	project management	Management, supervision and administration of the Project together with all temporary facilities required to complete the Project Work.	Number of completed Payment Periods divided by the total number of Payment Periods from the Effective Date to the Substantial Completion Target Date. If, by the Substantial Completion Date, the Relevant Percent Complete in respect of this Cost Item has not achieved 100%, the Relevant Percentage Complete for this Cost Item shall be deemed 100% during the Payment Period during which the Substantial Complete Date occurs.	
2. Mobilization				
2.1	mobilization	The activities carried out necessary to commence Design and Construction of the Project, including Proposal development.	Considered to be <u>100% complete</u> during the first Payment Period. No progress measurement shall be made prior to completion.	
3. Design				
3.1	Design development	Work falling within the definition bullet (a) of Design in Section 1.1 [Definitions and Interpretation] of Schedule 1 but excluding Construction Records and Final Design.	Number of completed Payment Periods <u>divided by</u> the total number of Payment Periods from the Effective Date to the date of the completion of the highway design in Schedule 3 of the Agreement. If the date of the completion of the highway design is revised, the percentage complete shall be recalculated.	
3.2	Final Design	Work falling within the definition of Final Design in Section 1.1 [Definitions and Interpretation] of Schedule 1.	Considered to be <u>100% complete</u> when the Final Design is “received” pursuant to the Review Procedure. Prior to 100% completion the total progress shall be 0%	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4. Construction				
4.1 Construction – River Road/Highway 17 Interchange				
4.1a	roadworks – preload	<p>Preload shall consist of the following work: clearing and grubbing; organic stripping; removals and relocations of existing plant; all other Site preparation required to be done prior to the placement of preload embankment; supply, placement and compaction of preload embankment material; monitoring and maintenance of the preload; provision and execution of all quality management, traffic management and environmental management as required.</p> <p>Hauling and placement of GMTR Preload is excluded from this Cost Item.</p>	Volume of preload placed <u>divided by</u> the total volume of preload required.	
4.1b	roadworks – GMTR preload	<p>GMTR preload shall consist of the following work: Hauling and placement of GMTR preload material from Highway 99 to the Project Site. Provision and execution of all quality management, traffic management and environmental management for the hauling and placement of the GMTR preload material from Highway 99 to the Project Site is included in this Cost Item.</p> <p>Compaction, monitoring, maintenance, quality management, traffic management and environmental management of the GMTR preload following placement on the Project Site is excluded from this Cost Item.</p>	Volume of preload placed <u>divided by</u> the total volume of preload required.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.1c	roadworks – grading	Grading shall consist of: (i) site preparation, which shall consist of the following: clearing and grubbing; organic stripping; removals and relocations of existing plant; all other site preparation required to be done prior to roadway and drainage excavation; (ii) excavation and disposal, which shall consist of the following: roadway and drainage excavation; disposal of unsuitable materials to off-site; disposal of surplus and/or surcharge material on site and off site; (iii) fills, which shall consist of the following: supply and installation of geotextiles; embankment construction; supply and installation of light weight embankment materials; supply, placement and compaction of imported rip rap and granular materials; and (iv) walls, which shall consist of the following: permanent retaining walls and in each case including provision and execution of quality management, traffic management and environmental management as required for the work.	(i) Area of site preparation completed <u>divided by</u> total area of site preparation required. (ii) Volume of excavation and disposal completed <u>divided by</u> total volume of excavation and disposal required. (iii) Volume of fills completed <u>divided by</u> total volume of fills required. (iv) Area of walls completed <u>divided by</u> total area of walls required.	(i) (ii) (iii) (iv)
4.1d	roadworks - landscaping	Landscaping includes berms, grading, placement of top-soil and hydroseeding, and placement of vegetation/trees/plantings.	Landscaping area completed <u>divided by</u> the total area of landscaping.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.1e	roadworks – utilities	Utilities shall consist of (but not necessarily be limited to) BC Hydro electrical, Fortis BC gas, MetroVan water and sanitary, Telus communications, Delta water and sanitary, and other third party public/private utility services.	Lump sum item for each utility pro-rated by the percentage completed.	
4.1f	roadworks – drainage	Drainage shall consist of (special) open ditches, enclosed/piped facilities, pumps/siphons, etc. required to convey run-off water.	Lump sum item for drainage pro-rated by the percentage completed.	
4.1g	roadworks – paving	<p>Paving shall consist of:</p> <p>(i) paving, which shall consist of the following: final grading of all surfaces to be paved; supply and application of penetrating primer and tack coat; supply and placement of asphalt pavement leveling course and asphalt pavement base lift; supply and installation of temporary pavement markings and temporary barriers; and</p> <p>(ii) finishing, which shall consist of the following: supply and application of penetrating primer and tack coat; supply and placement of asphalt pavement top lift; supply and installation of pavement drainage facilities; supply and installation of temporary and final pavement markings and delineation; supply and installation of barriers and appurtenances,</p> <p>and in each case including provision and execution of quality management, traffic management and environmental management as required for the work.</p>	<p>(i) Lane km’s of paving completed <u>divided by</u> the total lane km’s of paving required.</p> <p>(ii) Lane km’s of finishing completed <u>divided by</u> the total lane km’s of finishing required.</p>	<p>(i)</p> <p>(ii)</p>

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.1h	electrical/ITS & lighting	All electrical, ITS and lighting components required.	Lump sum item for Electrical, ITS & Lighting components pro-rated by the percentage completed.	
4.1i	Structures - Foundations	A foundation structure shall consist of one or more piles, caissons, and pile caps. A foundation structure shall be complete when ready to install a substructure.	Number of foundation groups complete <u>divided by</u> the total number of foundation groups. No progress measurement shall be made for any foundation structure that is not complete.	
4.1j	Structures – Substructures	A substructure shall consist of a column, group of columns, or wall structure that supports the approach superstructure in any one location, including the abutment structure including any beams, cross-heads, haunches, and any associated appurtenances to complete a substructure. A substructure shall be complete when ready to receive the superstructure.	Number of substructures complete <u>divided by</u> the total number of substructures. No progress measurement shall be made for any substructure that is not complete.	
4.1k	Structures – Superstructure – solid or framed Structure	Superstructure – solid or framed Structure shall include all work necessary to span between substructures including but not limited to a solid or framed structure of structural steel, in-situ concrete, or precast concrete excluding the structural deck slab.	Square meters of solid or framed structure erected and in place divided by the total area of solid or framed structure. The solid or framed structure is complete when it is ready to accept the deck or deck formwork. No progress measurement shall be made for any solid or framed structure that is not complete.	
4.1l	Structures – Superstructure – structural deck slab	Superstructure – structural deck slab consists of all work necessary to construct the structural deck slab excluding paving.	Area of the structural deck slab installed with all temporary structures removed <u>divided by</u> the total area of the structural deck slab. No progress measurement shall be made for any Structural Deck Slab that is not complete.	
4.1m	Structures – guide signs	Guide signs shall consist of foundation, including piling/footing, pile cap, sign structure, sign board and all other components required.	Lump sum item for each guide sign pro-rated by the percentage completed.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.2 Construction – Highway 91C/17 Interchange				
4.2a	roadworks – preload	See 4.1a above.	See 4.1a above.	
4.2b	roadworks – GMTR preload	See 4.1b above.	See 4.1b above.	
4.2c	roadworks – grading	See 4.1c above.	See 4.1c above.	(i) (ii) (iii) (iv)
4.2d	roadworks – landscaping	See 4.1d above	See 4.1d above.	
4.2e	roadworks – utilities	See 4.1e above.	See 4.1e above.	
4.2f	roadworks – drainage	See 4.1f above.	See 4.1f above.	
4.2g	roadworks – paving	See 4.1g above.	See 4.1g above.	(i) (ii)
4.2h	electrical/ITS & lighting	See 4.1h above.	See 4.1h above.	
4.2i	Structures – Foundations	See 4.1i above.	See 4.1i above.	
4.2j	Structures – Substructures	See 4.1j above.	See 4.1j above.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.2k	Structures – Superstructure – solid or framed Structure	See 4.1k above.	See 4.1k above.	
4.2l	Structures – Superstructure – structural Deck slab	See 4.1l above.	See 4.1l above.	
4.2m	Structures – guide signs	See 4.1m above.	See 4.1m above.	
4.3 Construction – Highway 91C/Weigh Scale Interchange				
4.3a	roadworks – preload	See 4.1a above.	See 4.1a above.	
4.3b	roadworks – GMTR preload	See 4.1b above.	See 4.1b above.	
4.3c	roadworks – grading	See 4.1c above.	See 4.1c above.	(i) (ii) (iii) (iv)
4.3d	roadworks – landscaping	See 4.1d above	See 4.1d above.	
4.3e	roadworks – utilities	See 4.1e above.	See 4.1e above.	
4.3f	roadworks – drainage	See 4.1f above.	See 4.1f above.	

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Appendix B: Progress Measurement Principles

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.3g	roadworks – paving	See 4.1g above.	See 4.1g above.	(i) (ii)
4.3h	electrical/TTS & lighting	See 4.1h above.	See 4.1h above.	
4.3i	Structures – Foundations	See 4.1i above.	See 4.1i above.	
4.3j	Structures – Substructures	See 4.1j above.	See 4.1j above.	
4.3k	Structures – Superstructure – solid or framed Structure	See 4.1k above.	See 4.1k above.	
4.3l	Structures – Superstructure – structural Deck slab	See 4.1l above.	See 4.1l above.	
4.3m	Structures – guide signs	See 4.1m above.	See 4.1m above.	
4.4 Construction – Nordel Way/Highway 91 Interchange				
4.4a	roadworks – preload	See 4.1a above.	See 4.1a above.	
4.4b	roadworks – GMTR preload	See 4.1b above.	See 4.1b above.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.4c	roadworks – grading	See 4.1c above.	See 4.1c above.	(i) (ii) (iii) (iv)
4.4d	roadworks – landscaping	See 4.1d above	See 4.1d above.	
4.4e	roadworks – utilities	See 4.1e above.	See 4.1e above.	
4.4f	roadworks – drainage	See 4.1f above.	See 4.1f above.	
4.4g	roadworks – paving	See 4.1g above.	See 4.1g above.	(i) (ii)
4.4h	electrical/ITS & lighting	See 4.1h above.	See 4.1h above.	
4.4i	Structures – Foundations	See 4.1i above.	See 4.1i above.	
4.4j	Structures – Substructures	See 4.1j above.	See 4.1j above.	
4.4k	Structures – Superstructure – solid or framed Structure	See 4.1k above.	See 4.1k above.	

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A	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
4.4l	Structures – Superstructure – structural Deck slab	See 4.1l above.	See 4.1l above.	
4.4m	Structures – guide signs	See 4.1m above.	See 4.1m above.	
4.4n	Structures - removals	Includes removal and disposal of all foundations, Substructures and Superstructures.	Method of progress measurement to be agreed to by the Province.	
4.4o	Delta Nature Reserve Boardwalk	<p>This Cost Item consists of:</p> <ul style="list-style-type: none"> (i) construction, which shall consist of the following: approximately 170 metres of new boardwalk including piling, deck structure, benches, plaques, signs; and (ii) demolition, which shall consist of the following: removal, decommissioning and disposal of approximately 190 metres of existing boardwalk following completion of the new boardwalk, <p>and in each case including provision and execution of quality management, traffic management and environmental management as required for the work.</p>	<ul style="list-style-type: none"> (i) Lineal metres of boardwalk completed <u>divided by</u> the total length of boardwalk required. (ii) Lineal metres of boardwalk demolished <u>divided by</u> the total length of boardwalk required to be demolished. 	<ul style="list-style-type: none"> (i) (ii)

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TABLE B-2 SPECIFIED COST ITEMS

	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
5. Specified Cost Items				
5.1	Construction Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when endorsed “received” by the Province pursuant to the Review Procedure. Prior to 100% completion the total progress shall be 0%.	
5.2	Design Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.3	Construction Environmental Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.4	Traffic Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.5	Quality Manual	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.6	Design Quality Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.7	Construction Quality Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	

**SCHEDULE 10: PAYMENT AND PERFORMANCE MECHANISM
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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
5.8	Traffic Quality Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.9	Environmental Quality Management Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.10	Construction Communications and Engagement Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.11	Community Benefits Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.12	Apprenticeship and Skills Training Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.13	Indigenous Participation Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when “accepted” by the Province pursuant to the Consent Procedure. Prior to 100% completion the total progress shall be 0%.	
5.14	Operation and Maintenance Plan	As defined in Section 1.1 of Schedule 1 [Definitions and Interpretation].	Considered to be <u>100% complete</u> when endorsed “received” by the Province pursuant to the Review Procedure. Prior to 100% completion the total progress shall be 0%.	

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	Cost Item	Description	Progress measurement	Cost Item Amount
A	B	C	D	E
5.15	Deliverables for Substantial Completion	As set out in Part 1 [Deliverables for Substantial Completion] of Appendix A to Schedule 4.	Considered to be <u>100% complete</u> when all such deliverables have been delivered to the Province and, where applicable, endorsed “received” by the Province pursuant to the Review Procedure. Prior to 100% completion the total progress shall be 0%.	
5.16	Deliverables for Total Completion	As set out in Part 2 [Deliverables for Total Completion] of Appendix A to Schedule 4.	Considered to be <u>100% complete</u> when all such deliverables have been delivered to the Province and, where applicable, endorsed “received” by the Province pursuant to the Review Procedure. Prior to 100% completion the total progress shall be 0%.	

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APPENDIX C
[NOT USED]

APPENDIX D
ASSIGNMENT OF NCE POINTS

Performance Requirement	Performance Category	Basis of Assessment	NCE Points Assigned
Design-Build Agreement and All Schedules			
Document deliverables submitted or provided to the Province	Timeliness	As specified in this Agreement (including the relevant Schedules)	
	Completeness	Either a Review Procedure (Schedule 2) resulting in repeat 'comments' on re-submitted submission documents specified in this Agreement (including the relevant Schedules), or a Consent Procedure (Schedule 2) resulting in repeat 'rejected' (other than a "deemed" rejection under Section 2.2(e) of Schedule 2 or a rejection on the merits of a submission) on submission documents specified in this Agreement (including the relevant Schedules)	
	Implementation	Where a Nonconformity occurs in relation to the implementation of any deliverable (where appropriate) required by this Agreement	
Schedule 4 : Design and Construction			
Performance Measures	Design and Construction Performance Measures	All measures (identified as PDCXXX) specified in Schedule 4	
Schedule 6 : Environmental Obligations			
Environmental conditions	Implementation	As designated as "Minor" in Schedule 6, Appendix B	
		As designated as "Moderate" in Schedule 6, Appendix B	
		As designated as "Major" in Schedule 6, Appendix B	
		As designated as "Severe" in Schedule 6, Appendix B	
Performance Measures	Environmental Performance Measures	All other measures (identified as PEXXX) specified in Schedule 6	

SCHEDULE 10: PAYMENT AND PERFORMANCE MECHANISM

Appendix D: Assignment of NCE Points

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Performance Requirement	Performance Category	Basis of Assessment	NCE Points Assigned
Schedule 7 : Quality Management			
Unresolved NCE's	Implementation	Where a NCE is not resolved within the response time specified on the Nonconformity Report in accordance with Schedule 7, Part 6.	
Performance Measures	Quality Performance Measures	All other measures (identified as PQXXX) specified in Schedule 7	
Traffic Management	Implementation of Traffic Management requirements	Where a Site Condition Rating Category 1 is assigned, or where a follow-up audit discloses that such Site Condition Rating Category 1 has not been remedied in accordance with Section 4.8 of Schedule 7	
		Where a Site Condition Rating Category 2 is assigned, or where a follow-up audit discloses that such Site Condition Rating Category 2 has not been remedied in accordance with Section 4.8 of Schedule 7	
		Where an Site Condition Rating Category 3 is assigned, or where a follow-up audit discloses that such Site Condition Rating Category 3 has not been remedied in accordance with Section 4.8 of Schedule 7	
Schedule 9 : Communication and Engagement			
Performance Measures	Communication and Engagement	As designated as "Minor" in Schedule 9	
		As designated as "Moderate" in Schedule 9	
		As designated as "Major" in Schedule 9	
		As designated as "Severe" in Schedule 9	
		All other measures (identified as PCXXX) specified in Schedule 9	
Schedule 17 : Records and Reports			
Performance Measures	Records Performance Measures	All measures (identified as PRXXX) specified in Schedule 17	

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Appendix D: Assignment of NCE Points

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Performance Requirement	Performance Category	Basis of Assessment	NCE Points Assigned
Schedule 21 : Community Benefits Requirements			
Performance Measures	Community Benefits Performance Measures	All measures (identified as PCBXXX) specified in Schedule 21	
Schedule 22 : Indigenous Requirements			
Performance Measures	Indigenous Requirements Performance Measures	All measures (identified as PIRXXX) specified in Schedule 22	

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APPENDIX E
PAYMENT APPLICATION FORMS

- 10A Draw Request
- 10B Deficiency Holdback Payment Application
- 10C Warranty Holdback Payment Application
- 10D Statutory Declaration in Support of Payment Application

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FORM 10A
DRAW REQUEST

[Date]

HER MAJESTY THE QUEEN
IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA
[Address]

Attention: •

Facsimile No.: •

Dear Sirs and Mesdames:

Re: Design-Build Agreement dated as of the Effective Date (as amended, modified, supplemented and restated from time to time, the “**Agreement**”) among Her Majesty the Queen in Right of the Province of British Columbia (the “**Province**”), BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership (the “**Design-Builder**”)

And Re: Draw Request under Section 6.1 [Draw Requests for Progress Payments] of Schedule 10 to the Agreement for Progress Payment for the Payment Period beginning • and ending • (the “**Relevant Payment Period**”)

1. This letter, including the Statement of Progress and other documentation attached hereto, constitutes a Draw Request pursuant to Section 6.1 [Draw Requests for Progress Payments] of Schedule 10 for a Progress Payment. Capitalized terms used and not defined in this Draw Request have the meanings given to them in the Agreement and references to Sections and Schedules are to Sections of and Schedules to the Agreement.

Calculation of Progress Payment

2. The Design-Builder hereby applies for a Progress Payment in the amount of \$• for the portion of the Project Work progressed during the Relevant Payment Period.

3. The Design-Builder hereby confirms that the Progress Payment for the Relevant Payment Period is calculated by reference to the following:

- (i) the Progress Amount in respect of the Relevant Payment Period: \$•
- (ii) the aggregate of all Cost Item Progress Amounts in respect of all Specified Cost Items, each of which is determined in accordance with Section 2.1(b) of Schedule 10 to be payable in respect of the Relevant Payment Period: \$•
- (iii) the amount of any amount payable for such Payment Period in respect of previous Progress Payments Holdbacks pursuant to Section 2.1(a)(iii) of this Schedule;

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- (iv) the amount of any holdback on account of the Progress Payment Holdback to be made for such Payment Period pursuant to Section 2.1(a)(iv) of this Schedule;
- (v) the amount of any holdback on account of the Warranty Holdback to be made for such Payment Period pursuant to Section 2.1(a)(v) of this Schedule;
- (vi) the amount of any holdback on account of the Deficiency Holdback to be made for such Payment Period pursuant to Section 2.1(a)(vi) of this Schedule;
- (vii) the total Progress Payment payable in respect of the Relevant Payment Period, determined pursuant to Section 2.1(a) of Schedule 10: \$●
- (viii) the applicable taxes payable in respect of any of the payments referred to above: \$●

[NTD: list breakdown of tax calculations]

- (ix) the following adjustments to reflect over-payments and/or underpayments (each such adjustment stated separately) in respect of Progress Payments made by the Province during the period prior to the Relevant Payment Period (for which adjustment has not already been made, including by way of determination of a negative Relevant Completion Percentage applicable to any Cost Item):

[NTD: list each adjustment, and the applicable dollar value]

- (x) interest payable in respect of any amounts owed, as described above:

[NTD: list each relevant amount, as described above, and the applicable amount of interest payable]

- (xi) the net amount owing by the Province to the Design-Builder or by the Design-Builder to the Province as at the end of the Relevant Payment Period in respect of the Province's obligation to make Progress Payments pursuant to Section 1.1 [Obligation to make Progress Payments] of Schedule 10: \$●

Claim for payment for additional or varied Project Work and Minor Works

- 4. The Design-Builder hereby applies for payment for the following amount in respect of any additional or varied Project Work performed by the Design-Builder pursuant to a Change Certificate issued pursuant to Part 2 [Changes] of Schedule 11 or for Minor Works performed by the Design-Builder pursuant to Section 1.2(a) of Schedule 11 [Changes]:
 - (i) the total amount payable in respect of any additional or varied Project Work authorized or approved by a Change Certificate and performed by the Design-Builder during the Relevant Payment Period: \$●
 - (ii) the total amount payable in respect of any Minor Works performed by the Design-Builder pursuant to Section 1.2(a) of Schedule 11 [Changes] during the Relevant Payment Period: \$●
 - (iii) the applicable taxes payable in respect of the payment referred to above: \$●

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[NTD: list breakdown of tax calculations]

- (iv) interest payable in respect of any amounts owed, as described above:

[NTD: list each relevant amount, as described above, and the applicable amount of interest payable]

- (v) the net amount owing by the Province to the Design-Builder, or by the Design-Builder to the Province, as at the end of the Relevant Payment Period in respect of the Province's obligation to pay for additional or varied Project Work and for Minor Works, in each case pursuant to Schedule 11 [Changes].

Net Amount Claimed

5. The final net amount payable by the Province to the Design-Builder, or payable by the Design-Builder to the Province, as the case may be, pursuant to this Draw Request (being the aggregate of the amounts set out in paragraphs 3(xi) and 4(v) above) is: \$●

Representations and Warranties

6. As of the date hereof but subject to any exceptions set out in Attachment A hereto, and as to the payment of Subcontractors as described in paragraph (iv) below, partly or wholly in reliance on statutory declarations of others, the Design-Builder hereby represents, warrants and certifies to the Province that:
- (i) the Project Work has progressed to the point indicated in this Draw Request;
 - (ii) the Cost Item Progress Amounts identified in this Draw Request have been properly incurred in accordance with Appendix B [Progress Measurement Principles] to Schedule 10;
 - (iii) the Project Work described in this Draw Request as having been done, has been done in accordance with the Design-Builder's obligations under the Agreement;
 - (iv) all of the Subcontractors have been paid in full up to the last Progress Payment received by the Design-Builder, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and the *Builders Lien Act* (British Columbia), if applicable;
 - (v) except to the extent communicated by the Design-Builder to the Province in writing, no Adverse Claim exists with respect to or as a result of or in relation to the Project Work;
 - (vi) the Design-Builder is entitled to payment in the amount requested;
 - (vii) no Design-Builder Default has occurred which has not been either waived in writing by the Province or remedied to the satisfaction of the Province;
 - (viii) there has not been any material adverse change in the Design-Builder's ability to perform its obligations under the Agreement; and

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- (ix) to the best of the Design-Builder's knowledge, there has not been any materially adverse change in any Subcontractor's ability to perform its obligations under the applicable Subcontract.

Attachments

7. Attached hereto is the Statement of Progress, as certified by the Independent Engineer, in respect of the Relevant Payment Period, together with working papers clearly setting forth the derivation of the percentages and amounts set out therein.
8. Attached hereto are working papers clearly setting forth the derivation of the percentages and amounts set out herein (to the extent the same are not already set forth in the working papers attached to the Statement of Progress) in accordance with all applicable calculations specified or referred to in Section 2.1 [Calculation of Progress Payments] of Schedule 10, Part 2 [Province Changes] of Schedule 11 or Part 1 [Minor Works] of Schedule 11.
9. Attached hereto is a statutory declaration in the form attached as Appendix E, Form 10D [Form of Statutory Declaration] of Schedule 10 which confirms compliance by the Design-Builder with the *Builders Lien Act* (British Columbia). **[NTD: Not required to be attached to Draw Request for first Payment Period – where this applies, note “not attached”]**
10. Attached hereto is the letter from the Workers' Compensation Board which confirms that the Design-Builder is in good standing with the Workers' Compensation Board and that all required remittances and assessments required by the WCA have been made to a date which is no more than three Business Days prior to the date of this Draw Request.
11. Attached hereto is a report on the status of the Project, including (i) a description of (A) the Design-Builder's progress during the Relevant Payment Period, (B) progress to date in relation to the Project Schedule and (C) the major activities performed by the Design-Builder during the Relevant Payment Period; and (ii) a look-ahead work plan for the three months following the Relevant Payment Period.

This Draw Request is made subject to and in accordance with the terms and conditions of the Agreement.

EXECUTED AND DELIVERED as of the date first written above.

PACIFIC GATEWAY CONSTRUCTORS
GENERAL PARTNERSHIP

By: _____
Name:
Title: Design-Builder's Representative

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Attachment A

[NTD: List any exceptions to representations and warranties]

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FORM 10B
DEFICIENCY HOLDBACK PAYMENT APPLICATION
[TO BE PRINTED ON THE DESIGN-BUILDER LETTERHEAD]

[Date]

HER MAJESTY THE QUEEN
IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA
[Address]

Attention: •

Facsimile No.: •

Dear Sirs and Mesdames:

Re: Design-Build Agreement dated as of the Effective Date (as amended, modified, supplemented and restated from time to time, the “**Agreement**”) among Her Majesty the Queen in right of the Province of British Columbia (the “**Province**”), BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership (the “**Design-Builder**”)

And Re: Payment Application for amount retained by the Province for the Deficiency Holdback under Section 3.1(b) of Schedule 5 of the Agreement for the month ending • (the “**Relevant Period**”).

-
1. This letter, including the documentation attached hereto, constitutes the Payment Application pursuant to Section 3.1(b) of Schedule 5 for payment of an amount retained by the Province for the Deficiency Holdback in respect of any Final Deficiency List Deficiencies. Capitalized terms used and not defined in this Payment Application have the meanings given to them in the Agreement and references to Sections and Schedules are to Sections of and Schedules to the Agreement.
 2. The Design-Builder hereby applies for payment in the amount of \$• retained by the Province for the Deficiency Holdback in respect of any Final Deficiency List Deficiencies, being the amount in respect of those Final Deficiency List Deficiencies that have been remedied to the satisfaction of the Province during the Relevant Period.

Representations and Warranties

3. As of the date hereof but subject to any exceptions which are set out in Attachment A hereto, and as to the payment of Subcontractors as described in paragraph (iv) below, partly or wholly in reliance on statutory declarations of others, the Design-Builder hereby represents, warrants and certifies to the Province that:
 - (i) this Payment Application relates to the Final Deficiency List Deficiencies (each a “**Resolved Deficiency**”) described in the table below, in respect of which:

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- (A) the amount(s), as indicated in the table below, were withheld in accordance with Schedule 10; and
- (B) the Province’s Representative has confirmed by his or her initials on the attached Final Deficiency List have been satisfactorily completed during the Relevant Period;

Resolved Deficiency	Amount in respect of Resolved Deficiency

- (ii) the amount which is the subject of this Payment Application has been calculated in accordance with the requirements of Section 3.1 [Deficiency Holdback] of Schedule 5 to the Agreement and the Design-Builder is entitled to payment in the amount requested;
- (iii) the quality of the Project Work undertaken by the Design-Builder in respect of the Resolved Deficiencies is in accordance with the Design-Builder’s obligations under the Agreement;
- (iv) all of the Subcontractors have been paid in full up to the last Progress Payment received by the Design-Builder, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and the *Builders Lien Act* (British Columbia), if applicable;
- (v) except to the extent communicated by the Design-Builder to the Province in writing, no Adverse Claim exists with respect to or as a result of or in relation to the Project Work;
- (vi) no Design-Builder Default has occurred which has not been either waived in writing by the Province or remedied to the satisfaction of the Province;
- (vii) there has not been any material adverse change in the Design-Builder’s ability to perform its obligations under the Agreement; and
- (viii) to the best of the Design-Builder’s knowledge, there has not been any materially adverse change in any Subcontractor’s ability to perform its obligations under the applicable Subcontract.

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Attachments

4. Attached hereto is a copy of the Final Deficiency List, which has been initialled by the Province's Representative to confirm which Final Deficiency List Deficiencies have been satisfactorily completed during the Relevant Period.
5. Attached hereto is a statutory declaration in the form attached at Appendix E, Form 10D [Form of Statutory Declaration] of Schedule 10 which confirms compliance by the Design-Builder with the *Builders Lien Act* (British Columbia).
6. Attached hereto is the letter from the Workers' Compensation Board which confirms that the Design-Builder is in good standing with the Workers' Compensation Board and that all required remittances and assessments required by the WCA have been made to a date which is no more than three Business Days prior to the date of this Payment Application.

This Payment Application is made subject to and in accordance with the terms and conditions of the Agreement.

EXECUTED AND DELIVERED as of the date first written above.

PACIFIC GATEWAY CONSTRUCTORS
GENERAL PARTNERSHIP

By: _____
Name:
Title: Design-Builder's Representative

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Attachment A

[NTD: List any exceptions to representations and warranties.]

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FORM 10C
WARRANTY HOLDBACK PAYMENT APPLICATION

[Date]

HER MAJESTY THE QUEEN
IN RIGHT OF THE
PROVINCE OF BRITISH COLUMBIA
[Address]

Attention: •

Facsimile No.: •

Dear Sirs and Mesdames:

Re: Design-Build Agreement dated as of the Effective Date (as amended, modified, supplemented and restated from time to time, the “**Agreement**”) among Her Majesty the Queen in right of the Province of British Columbia (the “**Province**”), BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership (the “**Design-Builder**”)

And Re: Payment Application under Section 3.2(b) of Schedule 5 to the Agreement for payment of the Warranty Holdback

-
1. This letter, including the documentation attached hereto, constitutes the Payment Application pursuant to Section 3.2(b) of Schedule 5 for payment of the Warranty Holdback. Capitalized terms used and not defined in this Payment Application have the meanings given to them in the Agreement and references to Sections and Schedules are to Sections of and Schedules to the Agreement.
 2. The Design-Builder hereby applies for payment in the amount of \$• , being the amount of the Warranty Holdback, less any amounts applied therefrom by the Province in accordance with Sections 2.3(c) and/or Section 2.3(d) of Schedule 5 to the Agreement.

Representations and Warranties

3. As of the date hereof (being a date following the expiry of the General Project Work Defect Warranty Period) but subject to any exceptions which are set out in Attachment A hereto, and as to the payment of Subcontractors as described in paragraph (iv) below, partly or wholly in reliance on statutory declarations of others, the Design-Builder hereby represents, warrants and certifies to the Province that:
 - (i) the amount which is the subject of this Payment Application has been calculated in accordance with the requirements of Section 3.2 {Warranty Holdback} of Schedule 5 and other relevant provisions of the Agreement;
 - (ii) the Design-Builder is entitled to payment in the amount requested;

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- (iii) all of the Subcontractors have been paid in full up to the last Progress Payment received by the Design-Builder, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and the *Builders Lien Act* (British Columbia), if applicable;
 - (iv) except to the extent communicated by the Design-Builder to the Province in writing, no Adverse Claim exists with respect to or as a result of or in relation to the Project Work;
 - (v) no Design-Builder Default has occurred which has not been either waived in writing by the Province or remedied to the satisfaction of the Province;
 - (vi) there has not been any material adverse change in the Design-Builder's ability to perform its obligations under the Agreement; and
 - (vii) to the best of the Design-Builder's knowledge, there has not been any materially adverse change in any Subcontractor's ability to perform its obligations under the applicable Subcontract.
4. Attached hereto is a statutory declaration in the form attached at Appendix E, Form 10D [Form of Statutory Declaration] of Schedule 10 which confirms compliance by the Design-Builder with the *Builders Lien Act* (British Columbia).
5. Attached hereto is the letter from the Workers' Compensation Board which confirms that the Design-Builder is in good standing with the Workers' Compensation Board and that all required remittances and assessments required by the WCA have been made to a date which is no more than three Business Days prior to the date of this Payment Application.

This Payment Application is made subject to and in accordance with the terms and conditions of the Agreement.

EXECUTED AND DELIVERED as of the date first written above.

PACIFIC GATEWAY CONSTRUCTORS
GENERAL PARTNERSHIP

By: _____
Name:
Title: Design-Builder's Representative

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 10: PAYMENT AND PERFORMANCE MECHANISM
Appendix E: Payment Application Forms

Commercial in Confidence
Execution

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Attachment A

[NTD: List any exceptions to representations and warranties.]

FORM 10D
STATUTORY DECLARATION IN SUPPORT OF PAYMENT APPLICATION

Re: Design-Build Agreement dated as of the Effective Date (as amended, modified, supplemented and restated from time to time, the “**Agreement**”) among Her Majesty the Queen in right of the Province of British Columbia (the “**Province**”), BC Transportation Financing Authority and Pacific Gateway Constructors General Partnership (the “**Design-Builder**”)

And Re: Payment Application under Section • [•] of Schedule 10 to the Agreement for • [describe relevant payment]

Capitalized terms used and not defined herein shall have the meanings given to them in the Agreement and references to Sections and Schedules are to Sections of and Schedules to the Agreement.

I solemnly declare that, as of the date of this statutory declaration, I am • [senior officer] of the Design-Builder, and as such have authority to bind the Design-Builder and have personal knowledge of the fact that, or have relied on one or more statutory declarations of others to establish that:

1. All of the Subcontractors have been paid in full up to the payment of the last Progress Payment in accordance with Section 1.1 of Schedule 10 to the Agreement, subject to holdbacks (including for amounts disputed in good faith) required or permitted by the Subcontracts and the *Builders Lien Act* (British Columbia).
2. The Design-Builder is in full compliance with the *Builders Lien Act* (British Columbia) and the WCA.
3. All accounts for labour, services, materials, equipment and overhead which have been incurred directly by the Design-Builder in the performance of the Project Work pursuant to the Agreement, have been paid in full up to and including the payment of the last Progress Payment in accordance with Section 1.1 of Schedule 10 to the Agreement.

I make this solemn declaration conscientiously believing it to be true, and knowing that it is of the same force and effect as if made under oath.

DECLARED BEFORE ME)
at Vancouver, British Columbia,)
on this ___ day of _____, in the year _____.)
)
) _____)
) _____)
A Commissioner for taking Affidavits for British) Name:
Columbia) Title:

**SCHEDULE 11
CHANGES**

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**PART 1
MINOR WORKS**

1.1 Procedure for Minor Works

The procedure set out in this Part 1 of this Schedule shall apply to any Minor Works initiated by either the Province or the Design-Builder pursuant to Section 7.3 [Minor Works]. No Change Report or Change Certificate shall be required for any such Minor Works, and neither the Review Procedure nor the Consent Procedure shall apply to the consideration of any such Minor Works.

1.2 Minor Works Initiated by Province

- (a) Upon receipt by the Design-Builder of a request by the Province for Minor Works pursuant to Section 7.3(a), then subject only to the Design-Builder within 14 days of the receipt of such request, delivering a notice to the Province's Representative objecting to such Minor Works pursuant to Section 4.2 [Design-Builder Objection] of this Schedule (in which case, the terms of Section 4.2 [Design-Builder Objection] of this Schedule will apply), the Design-Builder shall proceed to perform the Minor Works to completion as soon as reasonably practicable.
- (b) If, in the opinion of the Province, the Province is or would be likely to be required by the Competitive Procurement Requirements to competitively tender or seek competitive proposals, bids or tenders in respect of any contract in connection with or relating to the Minor Works, the Province may, in the notice delivered under Section 7.3(a), require the Design-Builder to seek and evaluate competitive proposals, bids or tenders for the Minor Works in accordance with Section 4.4 [Requirement to Undertake Competition] of this Schedule.
- (c) The Province shall, subject to Section 4.3 [Design-Builder Delay in Responding] of this Schedule, at its discretion, as the sole compensation to which the Design-Builder is entitled to in respect of such Minor Works:
 - (i) pay to the Design-Builder the amount of the Minor Works Valuation set out in the request delivered by the Province pursuant to Section 7.3(a) or as otherwise agreed between the parties, within 30 days of the receipt of an invoice from the Design-Builder for same;
 - (ii) pay the Design-Builder for any Minor Works performed pursuant to Section 1.2(a) of this Schedule, within 30 days of the receipt of a monthly invoice from the Design-Builder calculated on the following basis:
 - (A) labour costs shall be based on the hourly rate paid, consistent with rates applied in the open market to providers of services similar to those required in connection with the implementation of the Minor Works;
 - (B) Construction Plant shall be charged in accordance with the then current rates set out in the Blue Book (or any successor guide) or as otherwise agreed between the parties; and

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- (C) Plant shall be charged at the cost of such Plant to the Design-Builder (or any of its Subcontractors), consistent with rates applied in the open market, net of all discounts, plus a Mark-up of 15%; or
- (iii) if competitive proposals, bids or tenders are obtained pursuant to Section 4.4 [Requirement to Undertake Competition] of this Schedule for any Minor Works performed pursuant to Section 1.2(a) of this Schedule, pay to the Design-Builder for any such Minor Works, within 30 days of the receipt of an invoice from the Design-Builder, the amount of the proposal, bid or tender which best satisfies the requirements of the competitive process undertaken pursuant to Section 4.4(a) of this Schedule plus the out of pocket costs that the Design-Builder reasonably and necessarily incurs to obtain such competitive proposals, bids or tenders and that are approved by the Province prior to being incurred by the Design-Builder, unless otherwise agreed by the parties.

1.3 Minor Works Initiated by Design-Builder

Upon receipt by the Province's Representative of a Design-Builder Proposal to carry out Minor Works pursuant to Section 7.3(b), then, unless the Province, within 14 days of the receipt of such Design-Builder Proposal, delivers a notice to the Design-Builder objecting to the proposed Minor Works on any of the following grounds:

- (a) the proposed Minor Works fail to meet the requirements set out in Section 7.3(b);
- (b) if such Minor Works had been initiated by the Province, the Design-Builder would have been able to object to implementing such Minor Works on any of the grounds set out in Section 4.2(a) of this Schedule;
- (c) such Minor Works would result in a material departure from, material failure to comply with or material variation to any of the Project Requirements;
- (d) following such Minor Works the Project Infrastructure would not be of a quality or standard of performance or value (to the Province) equal to or better than that required under the Project Requirements prior to such Minor Works, or the residual value of the Project Infrastructure would be negatively affected;
- (e) the conduct of the Project Work in accordance with the proposed Minor Works would be less likely to achieve compliance with the Project Requirements and the Proposal Extracts or would be likely to provide for compliance to a lower standard or quality than the conduct of the Project Work in accordance with the Project Requirements and the Proposal Extracts prior to such Minor Works;
- (f) such Minor Works would interfere with the relationship of the Province with third parties, or would require the Province to obtain any permission, consent, approval, certificate, permit, licence, statutory agreement or authorization from any Governmental Authority, including the Province, or any other third party;
- (g) such Minor Works would otherwise materially affect the risks or costs to which the Province is exposed to in respect of the Project; or

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- (h) such Minor Works would require any amendment to any Design Data in respect of the Construction, thereby requiring the submission of such amendment of Design Data to the Design and Certification Procedure,

The Design-Builder may proceed to perform the Minor Works at the Design-Builder's sole risk and expense.

1.4 Consequential Amendments

The Province and the Design-Builder shall each use all reasonable efforts to reach agreement as to the amendments to the Project Requirements, and any other consequential non-material amendments to this Agreement, necessary as a consequence of any Minor Works carried out in accordance with this Part 1. If the Province and the Design-Builder are unable to reach agreement on such matters within 14 days, then either party may refer the matter for resolution under the Dispute Resolution Procedure.

PART 2 PROVINCE CHANGES

2.1 Notice of Province Change

The Province may, subject to the Province's ability to initiate a Province Change as a Minor Works under Section 7.3 [Minor Works], issue to the Design-Builder a request for a Province Change under Section 7.1 [Province Changes] setting out the nature, extent and timing of the relevant Province Change with sufficient detail and information to permit the Design-Builder to prepare and deliver to the Province's Representative a Change Report, and including whether:

- (a) in the opinion of the Province, the Province is or would be likely to be required by the Competitive Procurement Requirements to seek competitive proposals, bids or tenders in respect of any contract in connection with or relating to the Province Change such that the Design-Builder shall be required to seek and evaluate competitive proposals, bids or tenders for the Province Change under Section 4.4 [Requirement to Undertake Competition] of this Schedule; and
- (b) the Province requires the Design-Builder to provide a preliminary estimate of the impacts of the Province Change in accordance with Section 2.2 [Preliminary Estimate of Impacts of Province Change] of this Schedule.

2.2 Preliminary Estimate of Impacts of Province Change

- (a) When required by the Province for any Province Change pursuant to Section 2.1(b) of this Schedule, but subject to Section 4.2 [Design-Builder Objection] of this Schedule, within 14 days (or such later date as the Province may specify acting reasonably in the circumstances) of:
 - (i) the receipt by the Design-Builder of a request for a Province Change under Section 2.1 [Notice of Province Change] of this Schedule; or
 - (ii) where a Design-Builder Objection is received under Section 4.2 [Design-Builder Objection] of this Schedule, the receipt by the Design-Builder of a notice of

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disagreement from the Province in accordance with Section 4.2(b) of this Schedule;

the Design-Builder shall, at its sole cost and expense, deliver to the Province's Representative a written preliminary estimate of the impacts of such Province Change determined in accordance with this Schedule. Within 14 days of the delivery of such a preliminary estimate, the Province shall notify the Design-Builder in writing whether or not the Province desires to proceed with such Province Change.

- (b) The Design-Builder shall promptly provide the Province's Representative with such further or additional details and other information as the Province may request with respect to any preliminary estimate delivered by the Design-Builder pursuant to Section 2.2(a) of this Schedule, and, in the case of any such request, the 14 day period referred to in the last sentence of Section 2.2(a) of this Schedule shall not commence to run until such further details and other information have been provided to the Province's Representative.

2.3 Preparation of Change Report

- (a) Subject to Section 4.2 [Design-Builder Objection] of this Schedule:
 - (i) in circumstances where Section 2.2 [Preliminary Estimate of Impacts of Province Change] of this Schedule applies, within 7 weeks of receipt of notification from the Province pursuant thereto that the Province desires to proceed with a Province Change; or
 - (ii) in all other circumstances, within 9 weeks of:
 - (A) the receipt of a request for a Province Change under Section 2.1 [Notice of Province Change] of this Schedule; or
 - (B) where a Design-Builder Objection is received under Section 4.2 [Design-Builder Objection] of this Schedule, the receipt by the Design-Builder of a notice of disagreement from the Province in accordance with s. 4.2(b) of this Schedule;

the Design-Builder shall consider how to accommodate a proposed Province Change in a cost effective manner so as to minimize the cost of such Province Change and its impact on the Project Schedule and the Project, and otherwise on the performance of the Project Work, and shall prepare and submit to the Province's Representative pursuant to the Consent Procedure (subject to the specific time periods set out in Section 2.6 [Agreement or Disagreement Regarding Change Report] of this Schedule) a written report (a "**Change Report**") identifying all aspects of the Province Change as they relate to the Project, the Project Work and this Agreement including, without limitation:

- (iii) an estimate in accordance with Section 2.4 [Valuation of Change in Costs] of this Schedule of the Change in Costs arising from the implementation of the Province Change, and providing with such estimate:

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- (A) all necessary supporting calculations and information including particulars of additional sums to be paid to Subcontractors, financiers and professional advisors as reasonably requested and necessary for the Province to be able to understand and evaluate the estimate;
- (B) any time periods after which such estimated prices or parts thereof shall no longer be valid, which periods shall be of sufficient length to allow the Province a reasonable time to consider the Change Report and arrive at an initial evaluation;
- (C) any resulting lump sum payment which the Design-Builder proposes is required to be made pursuant to Section 2.5(a) of this Schedule to reflect the Change in Costs estimated by the Design-Builder under Section 2.3(a)(iii) of this Schedule, together with all supporting information required in accordance with this Agreement;
- (iv) any impact on any other amounts payable by one party to another party as a result of the implementation of the Province Change;
- (v) the Design-Builder's proposal for how any payments related to the Province Change will be invoiced and processed;
- (vi) any adjustments required to any of the dates set out in the Project Schedule due to the effect of carrying out such Province Change on any milestone dates set out in the Project Schedule, including any adjustment to the Substantial Completion Target Date or the Total Completion Target Date, which the Design-Builder shall require as a result of the implementation of the Province Change (including details of any corresponding adjustments required by any Subcontractors);
- (vii) any changes to the Design Data in respect of the Construction required to be submitted to the Design and Certification Procedure in order to implement such Province Change;
- (viii) any other amendments required to this Agreement, the Project Requirements or any Project Document as a result of such Province Change;
- (ix) the Design-Builder's requirements for any other assistance and resources from the Province or any other requirements of the Province reasonably required to implement the Province Change;
- (x) any required additional Permits or amendments to existing Permits or Permits that are in the course of being obtained;
- (xi) any additional Land Rights necessary for the purpose of implementing the Province Change;
- (xii) the extent to which the Province Change would interfere with the Design-Builder's ability to comply with any of its obligations under this Agreement, any Project Document or any Permits;

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- (xiii) the identity of any Subcontractors which the Design-Builder intends to engage for the purposes of implementing the Province Change; and
 - (xiv) any further effects (including benefits and impairments) which the Design-Builder foresees as being likely to result from the Province Change.
- (b) Without limiting any other rights of the Province to request further or additional information pursuant to Section 2.2(b) of this Schedule or any other provision of this Agreement, the Design-Builder shall promptly provide the Province's Representative with such further or additional details and other information as the Province may request with respect to any Change Report submitted by the Design-Builder pursuant to Section 2.3(a) of this Schedule and, in the case of any such request, any time period within which the Province is required to provide any response in respect of such Change Report shall not commence to run until such further details and other information have been provided to the Province's Representative.

2.4 Valuation of Change in Costs

The Design-Builder shall estimate and provide to the Province's Representative in the Change Report pursuant to Section 2.3(a)(iii) of this Schedule, the Change in Costs and shall, subject to Section 4.4 [Requirement to Undertake Competition] of this Schedule, incorporate in such estimate all such information in sufficient detail, including quantities, as the Province may reasonably require to enable it to properly evaluate and understand such estimate, including a detailed summary of the prices, costs, charges and Mark-ups used to calculate such estimate, and sufficient additional information (including a statement of the Design-Builder confirming such matters) to demonstrate to the satisfaction of the Province, acting reasonably, that the position of the Design-Builder will be no better and no worse than had the Province Change not been implemented, and including:

- (a) confirming that the Design-Builder has used all reasonable efforts, including where required in accordance with Section 4.4(a) of this Schedule or by the Competitive Procurement Requirements, or where otherwise reasonably appropriate, the use of competitive proposals, bids or tenders, to oblige its Subcontractors to minimize any increase in costs and to maximize any reduction in costs;
- (b) confirming that all costs of the Design-Builder and its Subcontractors are limited to actual amounts to the extent such amounts relate specifically to the Province Change and would not otherwise have been incurred and are:
 - (i) paid or to be paid or invoiced to the Design-Builder or its Subcontractors; or
 - (ii) paid by the Design-Builder or its Subcontractors,all without addition of any Mark-ups except as otherwise expressly provided for in this Section 2.4;
- (c) setting out the major elements and components of the additional costs and scope of work involved in implementing the Province Change, including:

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- (i) all costs reasonably necessary for and directly associated with the implementation of the Province Change, including the cost of labour, material and equipment, together with any quotations from Subcontractors;
- (ii) estimated Design costs based on the estimated number of hours reasonably required to perform any additional Design required to implement the Province Change; and
- (iii) estimated additional costs of site management, including the supervision of trade foremen, and site establishment including, without duplication, any costs related to the Design-Builder's management and oversight of the Project Work that should reasonably be included in the Province Change,

and with such estimated additional costs to be based and evaluated on the following principles:

- (iv) construction labour costs, except labour associated with Design and engineering, regardless of whether in operations, management or administration roles, shall be based on the hourly rate paid including allowance for all payroll burdens such as overtime premiums (when paid), vacation pay, pension funds, statutory payments, workers compensation insurance, union dues, tool money, medical insurance and any other payments directly paid in the ordinary course;
- (v) except as otherwise specified in this Agreement, costs of Design (excluding Design and engineering comprised in the cost of supply of equipment and systems) shall be determined based on the number of hours reasonably estimated to be required to perform the work multiplied by the net estimated hourly amount (based on base salary) paid to Design and engineering staff, multiplied by 3.0 (or such lower rate as may have been agreed by the Design-Builder or a Subcontractor for Design services pursuant to a Subcontract), and provided that if the Province requests to review the calculation of Design or engineering costs under a Subcontract as part of its review and evaluation, the Design-Builder shall make available all contractual provisions that are relevant to such calculation;
- (vi) costs of supply and delivery of materials, consumables and equipment, including associated costs such as costs of associated testing (including any laboratory and testing fees), any wastage as a direct result of the implementation of the Province Change, commissioning, spare parts, manuals and software, and including the Design and engineering related thereto, shall be based on the estimated price to be charged by the Subcontractor supplying such materials, consumables or equipment;
- (vii) costs of construction equipment shall be calculated using the rates as may have been agreed with the applicable Subcontractor supplying such construction equipment, or, if no such agreed rates exist, at the then current rates set out in the Blue Book, or as are otherwise reasonably commercially available, and the number of hours such equipment is estimated to be required to implement the Province Change, together with appropriate amounts for delivering such equipment to and from the place of Construction;

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- (viii) the cost of any other rental, fabrication facility or factory costs directly associated with the implementation of the Province Change shall be calculated based on the reasonable direct costs estimated to be paid by the Design-Builder or a Subcontractor;
 - (ix) all other associated costs attributable to the implementation of the Province Change, including costs of additional site establishment, disposal, traffic management, quality control, insurance, bonding, Permits, reasonable and appropriate disbursements and import duties, shall be calculated based on the estimated direct cost (using hourly rates, material costs and equipment costs calculated in accordance with Sections 2.4(c)(iv), (vi), (vii) and (viii) of this Schedule, quotations from Subcontractors and suppliers or other appropriate methods to ascertain costs) attributable to the Province Change that will be payable by the Design-Builder or a Subcontractor;
 - (x) appropriate allowances shall be made for warranty obligations; and
 - (xi) Mark-ups on additional costs attributable to the implementation of a Province Change shall, subject to Section 2.4(f) of this Schedule, be calculated as follows:
 - (A) Design Personnel: the entity actually undertaking the Design shall not be entitled to add a Mark-up for its Design personnel (for certainty, the multiplier referred to in Section 2.4(c)(v) of this Schedule shall be deemed not to be a Mark-up);
 - (B) Construction: regarding the costs of Construction involved in the implementation of the Province Change, the entity actually undertaking the Construction may be entitled to include, subject to Section 2.4(d) of this Schedule, a Mark-up of up to 15% of the net additional direct costs incurred in such Construction actually undertaken by such entity (excluding costs referred to in Section 2.4(c)(v) of this Schedule); and
 - (C) Subcontracts: regarding costs of management and supervision, for certainty, to the extent that any Change in Costs estimated by the Design-Builder includes additional management and supervision costs to be incurred by a Subcontractor, such costs shall be included in the breakdown of costs referred to in Section 2.4(c)(ix) of this Schedule, and Subcontractors shall not be entitled to include a Mark-up of the net additional price to be charged to the Subcontractor by a lower tier Subcontractor for work undertaken by such lower tier Subcontractor;
- (d) confirming that:
- (i) the amounts of profit and overhead included in the calculation of such estimated costs do not exceed the amounts referred to in Sections 2.4(c)(xi)(B) and (C);
 - (ii) the aggregate amount of:
 - (A) all Mark-ups for profit and overhead included by the Subcontractors; and

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(B) the Mark-up for profit and overhead included on amounts charged directly by the Design-Builder,

included in the calculation of such estimated costs does not exceed 15% of the Change in Costs; and

(iii) no other Mark-ups (except for any Mark-up referred to in Section 2.4(f) of this Schedule) are included,

and with the Mark-up so incorporated in such estimate reflecting the principles that overhead costs are not necessarily a linear geometric function of direct and indirect costs, and that the rate of profit should be commensurate with the risks and the commitment of capital that the Province Change requires of the Design-Builder;

(e) confirming that the estimate includes an estimate, without any Mark-up, of:

(i) all additional amounts that would be payable by the Design-Builder to the Province under Schedule 10 [Payment and Performance Mechanism] as a result of the implementation of the Province Change; and

(ii) any reduced amounts that would be payable by the Province to the Design-Builder under Schedule 10 [Payment and Performance Mechanism] as a result of the implementation of the Province Change;

(f) to the extent that the Province Change would directly result in a material adverse change to the Design-Builder in the overall risk allocation (which may include for such purpose where Project Schedule delays resulting from such Province Change have a material adverse impact on the Design-Builder's site overhead costs) under this Agreement as at the date of the delivery of the notice of the Province Change to the Design-Builder, taking into account any other factors mitigating the effect of the Province Change on the overall risk allocation (including any changes in this Agreement or the Project Requirements arising out of the Province Change), confirming that the amount of any Mark-ups included in the calculation of such estimated costs (in excess of the Mark-up for profit and overhead referred to in Section 2.4(d) of this Schedule) fairly and appropriately reflects such change in overall risk allocation;

(g) confirming that all costs included in such estimate reflect:

(i) labour and material rates applying in the open market to providers of services similar to those required in connection with the implementation of the Province Change;

(ii) rates in accordance with Section 2.4(c)(vii);

(iii) any and all changes in this Agreement or the Project Requirements arising out of the Province Change; and

(iv) any and all changes in risk allocation (including any Mark-up referred to in Section 2.4(f) of this Schedule);

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- (h) confirming that any costs of preparing the Change Report included in such estimate are recoverable by the Design-Builder pursuant to Section 2.9 [Costs of Preparing Change Report] of this Schedule;
- (i) confirming that the estimated costs will provide good overall value to the Province and take into account any reasonably foreseeable changes in Laws; and
- (j) confirming that the Design-Builder has obtained or will obtain the best value for money when procuring any work, services, supplies, materials or equipment required in connection with the implementation of the proposed Province Change and has complied or will comply with Good Industry Practice in relation to any such procurement, to a standard no less than the Design-Builder would apply if all costs incurred were to its own account without recourse to the Province.

2.5 Consequences of Province Changes

If it has been agreed or determined in accordance with this Part 2 that, as a result of a Province Change, a party is required to make a payment to another party, such payment shall be made by a lump sum payment in accordance with Section 10.2 [Additional Payments], or at such other times and in such other manner as may be set out in the Change Certificate for such Province Change.

2.6 Agreement or Disagreement Regarding Change Report

- (a) Following receipt by the Province's Representative of a Change Report prepared in accordance with Section 2.3 [Preparation of Change Report] of this Schedule in respect of a proposed Province Change, the Province and the Design-Builder shall each use all reasonable efforts to reach agreement on the matters described in Section 2.5 [Consequences of Province Change] of this Schedule and all other information contained in the Change Report, and any agreement so reached in writing shall, if recorded in a Change Certificate issued in accordance with Section 2.7 [Change Certificate] of this Schedule, be binding upon the Province and the Design-Builder with respect to the Province Change in accordance with Section 2.8 [Effect of Change Certificate] of this Schedule.
- (b) If the Province and the Design-Builder are unable to agree on the resolution of all matters referred to in the Change Report within 21 days of its receipt by the Province's Representative, the Province:
 - (i) may elect not to proceed with the relevant Province Change by notice to the Design-Builder; or
 - (ii) otherwise shall issue to the Design-Builder a Change Certificate stating the determination of the Province of the matters referred to in the Change Report.
- (c) If the Design-Builder disagrees with all or any of the determinations set out in a Change Certificate issued by the Province pursuant to Section 2.6(b)(ii) of this Schedule, then the Design-Builder may deliver to the Province's Representative within 21 days of the issuance of such Change Certificate notice that it disputes such determinations, failing which such Change Certificate shall be deemed to have been accepted by the Design-

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Builder. The Province and the Design-Builder shall cooperate to have such dispute resolved in a timely manner pursuant to the Dispute Resolution Procedure. Pending the resolution of any such dispute, the Design-Builder shall proceed with the implementation of the Province Change as directed by the Province in the Change Certificate and in accordance with Section 2.8 [Effect of Change Certificate] of this Schedule, provided that any amounts reasonably expensed, and any delay reasonably established, by the Design-Builder in proceeding to implement such Province Change pending resolution pursuant to the Dispute Resolution Procedure shall be dealt with as part of such Province Change.

2.7 Change Certificate

A Province Change shall be authorized by the Province issuing to the Design-Builder a certificate (the “**Change Certificate**”), which shall set out:

- (a) the extent to which such Province Change applies to vary any of the Project Work, the Project Schedule, the Project Requirements, this Agreement or the other Project Documents; and
- (b) any payment to be made in accordance with Section 2.5(a) of this Schedule and the schedule for the making of such payment; and
- (c) the resolution of any other matters contained in the Change Report.

2.8 Effect of Change Certificate

- (a) A Change Certificate shall have the effect of varying the Project Work, the Project Schedule, the Project Requirements and/or this Agreement to the extent provided therein with effect from the date of issuance of the Change Certificate or as otherwise provided in the Change Certificate, subject only to the contrary resolution of any Dispute Resolution Process initiated by the Design-Builder pursuant to Section 2.6(c) of this Schedule.
- (b) Unless otherwise agreed in writing or unless otherwise directed by the Province in writing, the Design-Builder shall not proceed with the performance of any Province Change prior to the issuance of a Change Certificate or as otherwise provided in the Change Certificate. With effect from the date of issuance of a Change Certificate or as otherwise provided in the Change Certificate or as otherwise agreed or directed by the Province in writing, the Design-Builder shall implement the Province Change as directed in the Change Certificate or as otherwise agreed or directed by the Province in writing, and shall, subject to the resolution of any dispute initiated by the Design-Builder in accordance with Section 2.6(c) of this Schedule be bound by this Agreement in so doing as if the Province Change formed part of the Project Requirements.
- (c) Subject only to a dispute initiated by the Design-Builder in accordance with Section 2.6(c) of this Schedule, once issued a Change Certificate shall be binding upon the Province and the Design-Builder with respect to the Province Change and may not be reopened by any party, and the relief and/or compensation, if any, to which the Design-Builder is entitled in accordance with such Change Certificate shall be the only relief

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and/or compensation to which the Design-Builder shall be entitled in respect of such Province Change.

2.9 Costs of Preparing Change Report

- (a) The costs incurred by the Design-Builder in preparing a Change Report shall be paid for as follows:
 - (i) all costs of the Design-Builder's own staff and employees which would normally be part of the general management, administration, and supervision of the Project Work and general construction estimating shall be paid for by the Design-Builder and such costs shall not form part of the Change in Costs; and
 - (ii) subject to Section 2.9(b) of this Schedule, the Design-Builder shall be entitled to receive payment from the Province, as part of the Change in Costs or, if the Province elects not to proceed with the relevant Province Change pursuant to Section 2.6(b)(i) of this Schedule, by separate payment to the Design-Builder by the Province, for any out of pocket costs that the Design-Builder reasonably and necessarily incurs, directly or indirectly, to prepare such Change Report and that are approved by the Province in writing prior to being incurred by the Design-Builder.
- (b) The Design-Builder shall not be entitled to receive payment from the Province pursuant to Section 2.9(a)(ii) of this Schedule for any out of pocket costs in respect of the preparation of a Change Report for a proposed Province Change if the preliminary estimate of the net amount of the Change in Costs arising from such Province Change prepared by the Design-Builder pursuant to Section 2.2 [Preliminary Estimate of Impacts of Province Change] of this Schedule was less than, by more than 20%, the net amount of the Change in Costs subsequently determined by the parties in accordance with this Part 2.

PART 3 VALUE ENGINEERING PROPOSALS

3.1 Notice of Value Engineering Proposal

The Design-Builder may submit to the Province's Representative pursuant to the Consent Procedure a Value Engineering Proposal under Section 7.4 [Value Engineering Proposal], which Value Engineering Proposal shall:

- (a) set out the extent to which such Value Engineering Proposal would, if accepted by the Province, apply to vary the Project Work, the Project Requirements and/or this Agreement;
- (b) set out all the applicable information required in a Change Report;
- (c) provide sufficient information to the Province's Representative to enable it to consider the sharing of benefits under Section 3.4 [Sharing Benefits of Value Engineering

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Proposal] of this Schedule and, in connection therewith, set out any lump sum payment to be made pursuant to Section 10.2 [Additional Payments] as a result;

- (d) specify the Design-Builder's reasons and justification for proposing the Value Engineering Proposal, including:
 - (i) the comparative advantages to the Design-Builder and the Province of each variation to the Project Work, the Project Requirements and/or this Agreement referred to in Section 3.1(a) of this Schedule;
 - (ii) confirmation that the financial strength of the Design-Builder is sufficient to implement the Value Engineering Proposal;
 - (iii) confirmation that, if such Value Engineering Proposal had been initiated by the Province, the Design-Builder would not have been able to refuse to implement such Value Engineering Proposal on any of the grounds set out in Section 4.2(a) of this Schedule; and
 - (iv) confirmation whether, if such Value Engineering Proposal had been initiated by the Design-Builder as a Minor Works, the Province could potentially have been able to reject such Value Engineering Proposal on any of the grounds set out in Section 1.3 [Minor Works Initiated by Design-Builder] of this Schedule, together with the Design-Builder's rationale for why the Value Engineering Proposal is nevertheless recommended to the Province notwithstanding the applicability of any such grounds for rejection; and
- (e) indicate if there are any dates by which a decision by the Province is requested.

3.2 Evaluation of Value Engineering Proposal

- (a) In accordance with the Consent Procedure, the Province shall consider any Value Engineering Proposal received from the Design-Builder, including:
 - (i) requesting any clarification or additional information or documentation regarding the Value Engineering Proposal as required by the Province to fully evaluate and consider the Value Engineering Proposal; and
 - (ii) requesting modifications of the Value Engineering Proposal if required by the Province, but provided that the Design-Builder may withdraw any Value Engineering Proposal in respect of which the Province requests any such modifications.
- (b) The Province may accept or reject any Value Engineering Proposal in its discretion.

3.3 Change Certificate for Value Engineering Proposal

If the Province accepts a Value Engineering Proposal pursuant to Section 3.2(b) of this Schedule, with or without modification, the relevant Value Engineering Proposal shall be documented and evidenced by a Change Certificate prepared by the Design-Builder and issued by the Province in the same

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manner as a Province Change under Section 2.7 [Change Certificate] of this Schedule.

3.4 Sharing Benefits of Value Engineering Proposal

If the Value Engineering Proposal causes or shall cause the costs of the Design-Builder or of a Subcontractor to decrease, after taking into account the agreed implementation and reasonably allocated development costs of the Value Engineering Proposal incurred by the Design-Builder or any Subcontractor, and taking into account any other uses of the Value Engineering Proposal by the Design-Builder, the net savings in the costs of the Design-Builder and any such Subcontractor shall be shared equally by the Design-Builder and the Province in the manner agreed to by the Province and set out in the relevant Change Certificate in response to the Design-Builder's proposal therefor provided under Section 3.1(c) of this Schedule.

3.5 Costs of Value Engineering Proposal

- (a) The Design-Builder may deliver to the Province's Representative preliminary information with respect to a proposed Value Engineering Proposal and the Province may, at its discretion, agree in advance to pay all or any portion of the costs of developing such Value Engineering Proposal.
- (b) Subject only to an agreement of the Province otherwise in accordance with Section 3.5(a) of this Schedule, all costs of a Value Engineering Proposal shall be borne solely by the Design-Builder, including that the Design-Builder shall pay to the Province promptly after receipt of an invoice therefor all costs and expenses reasonably incurred by the Province in connection with reviewing such Value Engineering Proposal and making a determination as to the acceptance or rejection of such Value Engineering Proposal, whether or not such Value Engineering Proposal is accepted and whether or not the proposed Value Engineering Proposal takes place, such costs and expenses to include professional costs and expenses, advisor fees and other out of pocket expenses, fees, costs and expenses charged to the Province and the Province's reasonable internal administrative and personnel costs. At the time of the Design-Builder's submission of a Value Engineering Proposal pursuant to Section 3.1 [Notice of Value Engineering Proposal] of this Schedule, and as a condition precedent to the commencement of any time period specified for the Province to object or otherwise respond to such submission and to any obligation of the Province to review or consider any matter in respect of which any such submission is made, the Design-Builder shall pay to the Province the sum of \$50,000 to be held by the Province on account of the Design-Builder's obligations to pay under this Section 3.5(b) in respect of such submission. After the relevant decision of the Province is rendered, the Province shall either refund any overpayment by the Design-Builder on account of amounts payable by the Design-Builder under this Section 3.5(b), or invoice the Design-Builder for any additional amounts payable by the Design-Builder under this Section 3.5(b), which additional amounts the Design-Builder shall pay within 14 days after receipt of such invoice.

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**PART 4
GENERAL PROVISIONS**

4.1 Modification of Processes and Procedures

Nothing in this Schedule or Part 7 [Province Changes and Design-Builder Proposals] shall limit the ability of the parties to mutually, in writing, modify, simplify or waive some or all of the processes and procedures outlined in this Schedule or such Part in respect of Province Changes or the Design-Builder Proposals, including Minor Works and Value Engineering Proposals.

4.2 Design-Builder Objection

- (a) With the exception of Required Province Changes, the Design-Builder may, acting reasonably, in response to a request for a Province Change or Minor Works, as the case may be, object to providing a preliminary estimate, providing a Change Report, or implementing a Minor Works, as the case may be, on the basis that:
 - (i) to implement the Province Change would not be technically feasible;
 - (ii) the Province Change would, if implemented, materially and adversely affect the Design-Builder's ability to perform its obligations under this Agreement or any other Province Project Document, after having taken into account any amendments to any provision thereof contemplated under this Schedule, and the sufficiency of funds available to the Design-Builder from all sources, including debt, equity and any payments to be made to the Design-Builder by the Province in respect of such Province Change under this Schedule;
 - (iii) to implement the Province Change would be contrary to Good Industry Practice;
 - (iv) to implement the Province Change would be contrary to Laws;
 - (v) to implement the Province Change would be unsafe;
 - (vi) the Design-Builder would be unable (using all reasonable efforts in respect thereof) to obtain any new Permit or any amendment or revision to an existing Permit (other than any new or amended Permit that would be the responsibility of the Province) that is:
 - (A) necessary to implement the Province Change;
 - (B) necessary otherwise to allow compliance with the provisions of this Agreement as a consequence of implementation of such Province Change having regard to the provisions of this Agreement (as amended, where appropriate, to take account of or make provision for the Province Change); or
 - (C) necessitated by the revocation or cancellation of any existing Permit or the imposition of any additional conditions with which the Design-

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Builder would be unable to comply in relation to any existing Permit occurring as a result of the Province Change;

- (vii) the Design-Builder would be unable (using all reasonable efforts in respect thereof) to obtain any Land Rights necessary for the purpose of implementing the Province Change except where the Province obtains, directly or indirectly, such Land Rights; or
- (viii) in the case of Minor Works, the Minor Works fail to meet the applicable requirements set out in Section 7.3(a);

provided that the Design-Builder shall deliver to the Province's Representative, within 14 days after the receipt by the Design-Builder of the request for such Province Change, written notice of such objection together with an explanation of the Design-Builder's reasons therefore in sufficient detail to permit a considered review thereof by the Province. If the Design-Builder does not deliver to the Province's Representative any such written notice of objection within such time period, the Design-Builder shall be deemed to have agreed to such Province Change and shall either proceed with the performance of such Minor Works under Section 1.2(a) of this Schedule or the preparation of a preliminary estimate under Section 2.2 [Preliminary Estimate of Impacts of Province Change] of this Schedule or the preparation a Change Report under Section 2.3 [Preparation of Change Report] of this Schedule for such other Province Change, as the case may be.

- (b) If the Province disagrees with the Design-Builder's objection delivered under Section 4.2(a) of this Schedule, then the Province may notify the Design-Builder of such disagreement within 14 days of the receipt of the Design-Builder's objection, failing which the request for such Province Change shall be deemed to have been cancelled. Upon receipt of a notice of disagreement by the Province, the parties shall cooperate to have any such dispute resolved in a timely manner pursuant to the Dispute Resolution Procedure and, pending the resolution of such dispute, the Design-Builder shall, unless otherwise agreed in writing by the Province, proceed with the performance of such Minor Works under Section 1.2(a) of this Schedule or the preparation of a preliminary estimate under Section 2.2 [Preliminary Estimate of Impacts of Province Change] of this Schedule, or the preparation of a Change Report under Section 2.3 [Preparation of Change Report] of this Schedule for such other Province Change, as the case may be, provided that:
 - (i) any amounts reasonably incurred and any delay reasonably established by the Design-Builder in proceeding to implement such Province Change pending resolution pursuant to the Dispute Resolution Procedure shall be dealt with as part of such Province Change; and
 - (ii) any claims for costs incurred or suffered by the Design-Builder as a result of proceeding despite the Design-Builder's objection, will be addressed as part of any Dispute Resolution Procedure invoked pursuant to this Section 4.2(b), unless otherwise addressed through a Province Change or the provisions of this Schedule.

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4.3 Design-Builder Delay in Responding

In the event that the Design-Builder fails to:

- (a) commence the performance of any Minor Works requested by the Province in accordance with the terms provided for in this Schedule;
- (b) prepare a preliminary estimate of impacts, if required by the Province, within the applicable time period set out in Section 2.2(a) of this Schedule;
- (c) prepare a Change Report within the applicable time period set out in Section 2.3(a) of this Schedule; or
- (d) meet any other time period required in respect of any Minor Works or other Province Change under either Part 7 [Province Changes and Design-Builder Proposals] or this Schedule,

then, without limiting any rights of the Province under this Agreement in respect of such failure, the Design-Builder shall bear the sole risk and expense of any increase in the amount that the Province would be required to pay to the Design-Builder pursuant to Part 7 [Province Changes and Design-Builder Proposals] and this Schedule in respect of such Minor Works or other Province Change as a result of such delay. The onus for establishing that no such increase has resulted from such delay shall be on the Design-Builder.

4.4 Requirement to Undertake Competition

- (a) If the Province gives notice of the requirement for the Design-Builder to undertake a competition for any Minor Works or other Province Change pursuant to Section 1.2(b) or Section 2.1(a) of this Schedule then, subject to the Competitive Procurement Requirements, the Design-Builder shall obtain or cause its Subcontractors to obtain, as appropriate, at least three competitive proposals, bids or tenders that would (if the Province were procuring such work directly) meet the Competitive Procurement Requirements for the work involved in such Minor Works or other Province Change, and at least one of such proposals, bids or tenders shall, subject to any contrary Competitive Procurement Requirements, be from a third party at arm's length from the Design-Builder and its Affiliates.
- (b) In the case of Minor Works, the Province shall, notwithstanding the receipt of proposals, bids or tenders pursuant to Section 4.4(a) of this Schedule, make payment for such Minor Works in accordance with Section 1.2(c) of this Schedule.
- (c) In the case of any Province Change in respect of which competitive proposals, bids or tenders are required, the Change in Costs for such Province Change (or relevant portion thereof) shall be the amount obtained pursuant to the proposal, bid or tender which best satisfies the requirements of the competitive process undertaken pursuant to Section 4.4(a) of this Schedule, plus any Mark-up contemplated in Sections 2.4(c)(xi) and (f) of this Schedule.

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4.5 Changes Not to Correct Errors in Cost Estimates

Neither the Design-Builder nor the Province shall use a Design-Builder Proposal or a Province Change, respectively, to correct or derive benefit from any errors or omissions in the cost estimates provided by the Design-Builder for any Project Work forming part of this Agreement.

4.6 Disputes

Any dispute between the parties arising in connection with any matter in respect of a Province Change or Design-Builder Proposal, including any Minor Works, shall be resolved in accordance with the Dispute Resolution Procedure.

**SCHEDULE 12
PROPOSAL EXTRACTS**

Nil

**SCHEDULE 13
COMPENSATION ON TERMINATION**

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**PART 1
COMPENSATION ON TERMINATION OTHER THAN FOR DESIGN-BUILDER DEFAULT**

1.1 Obligation to Pay Non-Default Termination Sum

If the Province terminates this Agreement pursuant to Section 8.7(b)(ii) or Section 14.1(a), or if either the Design-Builder or the Province terminates this Agreement pursuant to Section 8.6(a) or 8.7(a)(iv), or if the Design-Builder terminates this Agreement pursuant to Section 13.3(a) or Section 13.3(b), the Province shall pay to the Design-Builder the Non-Default Termination Sum as set out in Section 1.2 [Calculation of Non-Default Termination Sum] of this Schedule, subject to adjustment pursuant to Part 3 [General Provisions] of this Schedule.

1.2 Calculation of Non-Default Termination Sum

The “**Non-Default Termination Sum**” shall be an amount equal to the aggregate of the Design-Builder Breakage Costs less, unless already retained by the Province pursuant to Section 2.1(a)(vi) of Schedule 10 [Payment and Performance Mechanism], the Warranty Holdback.

1.3 Date for Payment of Non-Default Termination Sum

The Province shall pay the Non-Default Termination Sum on or before the later of:

- (a) the date that is 60 Business Days after the Termination Date; and
- (b) the date that is 30 Business Days after the date on which the Non-Default Termination Sum is finally determined by agreement of the Province and the Design-Builder or in accordance with the Dispute Resolution Procedure;

provided that, if there is a dispute as to the calculation of the Non- Default Termination Sum, any undisputed amount shall be paid on or before the payment date referred to in Section 1.3(a) of this Schedule and any remainder shall be paid on or before the payment date referred to in Section 1.3(b) of this Schedule with interest on such remainder at a rate of interest per annum equal to the No Default Interest Rate calculated from the payment date referred to in Section 1.3(a) of this Schedule until the date of payment.

**PART 2
COMPENSATION ON TERMINATION FOR DESIGN-BUILDER DEFAULT**

2.1 Obligation to Pay Compensation on Design-Builder Default

If the Province terminates this Agreement pursuant to any of Sections 8.7(a)(iii), 12.3(b), 12.3(a), 12.3(c)(ii), 12.3(d) and 12.4 [Termination for Failure to Remedy According to Program], the Design-Builder shall pay to the Province or the Province shall pay to the Design-Builder, as determined by this Part 3, the termination sum calculated in accordance with this Part 2 (the “**Design-Builder Default Termination Sum**”), subject to any adjustment in accordance with Part 3 [General Provisions] of this Schedule.

2.2 Components of Design-Builder Default Termination Sum

Subject to the other provisions of this Part 2, the Design-Builder Default Termination Sum shall be an amount calculated by reference to the following amounts:

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- (a) the aggregate, without duplication, of:
 - (i) the Contract Price; and
 - (ii) any sums not forming part of the Contract Price that have become due and payable from the Province to the Design-Builder prior to the Termination Date in accordance with this Agreement, but which remain unpaid as at the Termination Date, to the extent that such sums have not subsequently been paid; and

- (b) the aggregate, without duplication, of the following amounts:
 - (i) all Progress Payments paid by the Province to the Design-Builder on or before the Termination Date;
 - (ii) the amount, if any, of the Deficiency Holdback paid by the Province to the Design-Builder pursuant to Section 3.1(c) of Schedule 5 [Project Work Defects and Warranties] on or before the Termination Date, or treated as having been so paid pursuant to Section 3.2(d)(i) of this Schedule;
 - (iii) the amount, if any, of the Warranty Holdback paid by the Province to the Design-Builder pursuant to Section 3.2(c) of Schedule 5 [Project Work Defects and Warranties] on or before the Termination Date;
 - (iv) the Province's estimate of all costs and expenses paid, payable or that will be payable by the Province associated with the termination of this Agreement including the cost of appointment, mobilisation and installation of a replacement contractor (or procuring the performance of the unfulfilled obligations of the Design-Builder by the Province);
 - (v) the Province's estimate of amounts paid, payable or that will be payable by the Province to any alternative contractor(s) for the performance of obligations equivalent to the unfulfilled obligations of the Province under this Agreement, including for the avoidance of doubt the cost of remedying any Project Work Defects and obtaining warranties for Work in place and to be performed equivalent to those provided for in this Agreement;
 - (vi) the Province's estimate of its costs in reinstating any of its assets or other equipment required for the performance of its obligations under this Agreement, to the extent that such reinstatement is required as a result of a breach by the Design-Builder of any of its obligations under this Agreement;
 - (vii) the Province's estimate of all other Direct Losses incurred or to be incurred by the Province associated with the termination of this Agreement and (to the extent that the Province has not previously been compensated for such Direct Losses) any breach by the Design-Builder of any of its obligations under this Agreement prior to the Termination Date; and
 - (viii) any sums that have become due and payable from the Design-Builder to the Province prior to the Termination Date in accordance with this Agreement but

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which remain unpaid as at the Termination Date, to the extent that such sums have not subsequently been paid.

provided that:

- (c) to the extent that any costs, expenses or Direct Losses included in the calculation of the Design-Builder Default Termination Sum are based on estimates by the Province and the actual costs, expenses or Direct Losses incurred by the Province in respect of the relevant items differ from the estimates by a material amount, the Province and the Design-Builder shall promptly adjust the amount of the Design-Builder Default Termination Sum or, if the Design-Builder Default Termination Sum has been paid in accordance with this Schedule prior to the date on which such difference has been established, make payment or repayment accordingly, without interest; and
- (d) if Section 3.1(e) of Schedule 5 [Project Work Defects and Warranties] applies, the calculation of the Design-Builder Default Termination Sum shall:
 - (i) treat any amount retained by the Province in accordance with Section 3.1(e) of Schedule 5 [Project Work Defects and Warranties] (the “**Retained Deficiency Amount**”) as having been paid by the Province to the Design-Builder on or before the Termination Date; and
 - (ii) not take into account any costs or expenses that the Province has incurred or will incur in remedying any Final Deficiency List Deficiency in respect of which any such Retained Deficiency Amount applies.

2.3 Timing of Calculation of Design-Builder Default Termination Sum

The Design-Builder Default Termination Sum shall be calculated as of the Termination Date.

2.4 Calculation of Design-Builder Default Termination Sum

If the aggregate amount calculated in accordance with:

- (a) Section 2.2(b) of this Schedule exceeds the aggregate amount calculated in accordance with Section 2.2(a) of this Schedule, the Design-Builder Default Termination Sum shall be an amount equal to the excess and shall be payable by the Design-Builder to the Province;
- (b) Section 2.2(a) of this Schedule exceeds the aggregate amount calculated in accordance with Section 2.2(b) of this Schedule, the Design-Builder Default Termination Sum shall be an amount equal to the excess and shall be payable by the Province to the Design-Builder; or
- (c) each of Sections 2.2(a) and 2.2(b) of this Schedule are equal, the Design-Builder Default Termination Sum shall be zero and no amount shall be payable by the Design-Builder to the Province by the Province to the Design-Builder pursuant to this Part 2.

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2.5 Date for Payment of Design-Builder Default Termination Sum

The Design-Builder or the Province, as applicable, as determined by this Part 2, shall pay the Design-Builder Default Termination Sum calculated in accordance with this Part 2 on or before the later to occur of:

- (a) the date that is 60 Business Days after the Termination Date; and
- (b) the date that is 30 Business Days after the date on which the Design-Builder Default Termination Sum is finally determined by agreement of the Province and the Design-Builder or in accordance with the Dispute Resolution Procedure, provided that, if there is a dispute as to the calculation of the Design-Builder Default Termination Sum, any undisputed amount shall be paid on or before the payment date referred to in Section 2.5(a) of this Schedule and any remainder shall be paid on or before the payment date referred to in this Section 2.5(b), with interest on such remainder at a rate of interest per annum equal to the No Default Interest Rate, calculated from the payment date referred to in Section 2.5(a) of this Schedule until the date of payment.

**PART 3
GENERAL PROVISIONS**

3.1 No Compensation to Extent of Insurance

Notwithstanding anything to the contrary in this Schedule or this Agreement, the Design-Builder shall not be entitled to be compensated by the Province under this Schedule, and any amounts payable by the Province under any provisions of this Schedule shall be reduced, to the extent:

- (a) that:
 - (i) the Design-Builder recovers or is entitled to recover under any Required Insurance, or would have been able to recover under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement; or
 - (ii) there are insurance proceeds available to the Design-Builder in respect of the Project, or that would have been available to the Design-Builder in respect of the Project under any Required Insurance if such Required Insurance had been taken out and maintained in accordance with this Agreement;

whether or not such Required Insurance was in fact effected or, if effected, was vitiated, and whether vitiated as a result of any act or omission of the Design-Builder or of any person for whom the Design-Builder is in law responsible (including, but not limited to, by reason of non-disclosure or under-insurance or failure or insolvency of the insurer), or for any other reason, excluding only vitiation caused by any act or omission of the Province or any person for whom the Province is in law responsible, but only to the extent non-vitiation terms protecting against vitiation in the case of such act or omission are not required by the terms of this Agreement to be included in the applicable insurance policies, and any such insurance proceeds recovered by or available to the Design-Builder were not taken into account in the calculation of the compensation payable by the Province under this Schedule; or

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- (b) that the Design-Builder recovers or is entitled to recover under any policy of insurance that is not Required Insurance but that the Design-Builder has in fact taken out and maintained, and any such insurance proceeds recovered by or available to the Design-Builder were not taken into account in the calculation of the compensation payable by the Province under this Schedule; or
- (c) that the Province has made or authorized payment to or for the account of or on behalf of the Design-Builder or the Design-Builder is entitled to receive proceeds of insurance, under any of Sections 6.18(b), (c), (d) and (e) and such payments were not taken into account in the calculation of the compensation payable by the Province under this Schedule; or
- (d) of any amounts in respect of deductibles and waiting periods under any of the insurance referred to in either of Sections 3.1(a) and (b) of this Schedule for which the Design-Builder is responsible.

3.2 Adjustment for Net Balance

Any amount payable by the Province as compensation on termination under this Schedule shall be:

- (a) increased by any net balance owing by the Province or BCTFA pursuant to Section 14.6(c); or
- (b) reduced by any net balance owing by the Design-Builder to the Province or BCTFA pursuant to Section 14.6(c).

3.3 Rights of Set-Off

- (a) Subject to Section 3.3(b) of this Schedule, any amount that is payable by the Province to the Design-Builder pursuant to this Schedule shall be reduced by any amount the Province is entitled to set off under Section 10.4 [Province's Right of Set Off] (provided this right of set off shall not apply to an amount payable by the Design-Builder to the Province pursuant to Section 14.6(c) where the amount payable by the Province as compensation on termination has been reduced pursuant to Section 3.2 [Adjustment for Net Balance] of this Schedule by the amount payable by the Design-Builder to the Province pursuant to Section 14.6(c)).
- (b) To any extent that:
 - (i) any amount the Province is entitled to set off referred to in Section 3.3(a) of this Schedule; or
 - (ii) any net balance owing by the Design-Builder referred to in Section 3.2(b) of this Schedule;

is not fully paid and satisfied by deduction from or reduction of any amounts payable by the Province to the Design-Builder under this Schedule because the amount referred to in Section 3.3(b)(i) or Section 3.3(b)(ii) of this Schedule is greater than the amount of compensation on termination payable by the Province under this Schedule, or because no

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compensation on termination is payable by the Province under this Schedule, or for any other reason, the Design-Builder shall pay to the Province on demand the amount remaining unpaid and unsatisfied.

3.4 Full and Final Settlement

Notwithstanding any other provision of this Agreement or rule of law or equity to the contrary:

- (a) either:
 - (i) payment of the amount payable by the Province pursuant to this Schedule in respect of a termination of this Agreement; or
 - (ii) a determination that neither the Province nor the Design-Builder has an obligation to make any payment to the other pursuant to this Schedule in respect of a termination of this Agreement;

shall be in full and final satisfaction of all Claims that, in relation to any Supervening Events, or breaches or defaults under, or termination of, this Agreement, or any other cause, matter or thing whatsoever with respect to this Agreement, can be made or brought against the Province or BCTFA by the Design-Builder, whether under contract, tort, restitution or otherwise;

- (b) the right to compensation payable under this Schedule is the sole and exclusive remedy of the Design-Builder against the Province and BCTFA for any termination of this Agreement and the Design-Builder is excluded from all other rights or remedies in respect thereof; and
- (c) without limiting the generality of the foregoing Sections 3.4(a) and (b), the Design-Builder shall have no Claim against the Province or BCTFA in respect of any Project Work performed up to the Termination Date, or for any refund or repayment of all or any part of the Performance Incentive Payments, apart from any compensation payable by the Province pursuant to this Schedule,

except, in the case of each of Sections 3.4(a), (b) and (c), for any liability of the Province or BCTFA to the Design-Builder that arose prior to the Termination Date (but not from the termination itself) and has not already been compensated for, or taken into account, in determining the relevant compensation amount and adjustments thereto payable by the Province pursuant to this Schedule, and except, in the case of Section 3.4(a), any liability of the Province or BCTFA to make a payment pursuant to Section 3.2(c) of Schedule 5 [Project Work Defects and Warranties].

The Design-Builder acknowledges and agrees that the provisions of this Schedule do not constitute or result in a penalty or forfeiture.

3.5 Calculation of Compensation

- (a) Promptly after the giving of any Notice of Intention to Terminate, or any notice of termination pursuant to a right to terminate the validity of which is or has been determined or accepted in accordance with Section 14.4(b) or Section 14.4(c), in respect of a termination of this Agreement:

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- (i) to which Section 1.1 [Obligation to Pay Non-Default Termination Sum] of this Schedule applies, the Design-Builder shall determine in accordance with the provisions of this Agreement the amount of compensation payable as of the actual Termination Date if known and as of an estimated Termination Date otherwise, and shall provide to the Province's Representative notice of such amount and the details of the calculation of each component thereof; or
- (ii) to which Section 3.1 [Obligation to Pay Compensation on Design-Builder Default] of this Schedule applies, the Province shall give to the Design-Builder a statement setting out the Design-Builder Default Termination Sum,

together in each case with all such documents and information that the Province's Representative or the Design-Builder, as the case may be, may from time to time in a timely manner reasonably request for the purposes of calculating, confirming the calculation of, or verifying, the amount of compensation payable.

- (b) If the amount of compensation calculated pursuant to subsection (a) above was determined as of an estimated Termination Date, promptly after the actual Termination Date the applicable party shall provide to the other party the calculation, information and documents referred to in subsection (a) above as of the actual Termination Date, together with an explanation (with supporting calculations, certificates and documents) of the difference between the amount of compensation calculated as of the estimated Termination Date and the amount of compensation calculated as of the actual Termination Date.
- (c) Within 30 days after the latest of:
 - (i) the date of receipt by the applicable party of a notice of a compensation amount from the other party under subsection (a) above with supporting details of the calculation of each component thereof, certificates and other documents as provided in subsection (a) above;
 - (ii) if applicable, the date of receipt by the applicable party of the additional explanation, calculations, information, certificates and documents referred to in subsection (b) above; and
 - (iii) the date of receipt by the applicable party of any other documents and information reasonably requested by the other party in a timely manner for the purposes of calculating, confirming the calculation of, or verifying, the amount of compensation payable;

the applicable party shall by notice to the other party either:

- (iv) confirm its agreement with the calculation of amount of compensation payable; or
- (v) confirm its disagreement with the calculation of the amount of compensation payable and provide an explanation and reasonable particulars as to the basis for such disagreement.

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- (d) Where the applicable party confirms its disagreement with the calculation of the amount of compensation payable, the matter shall be referred to and resolved according to the Dispute Resolution Procedure.

3.6 Condition Precedent to Payment

Notwithstanding any other provision of this Schedule or this Agreement, it shall be a condition precedent to any payment by the Province to the Design-Builder of any compensation on termination that the Design-Builder shall have complied in all material respects with its obligations under Sections 14.8 [Transfer of Assets] and 14.9(b) to (e) inclusive.

**SCHEDULE 14
SPECIMEN BONDS**

SPECIMEN - PERFORMANCE BOND

NO. _____

• Dollars (\$●)

KNOW ALL PERSONS BY THESE PRESENTS, that PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP as Principal, hereinafter called the Principal, and (SURETY/INSURANCE COMPANY NAME(S) AND ADDRESS(ES)), a corporation or corporations created and existing under the laws of Canada, and duly authorized to transact the business of Suretyship in Canada, as Surety, hereinafter called the Surety if one Surety is named in this Bond and the Co-Sureties if more than one, is/are subject to the conditions hereinafter contained, held and firmly bound, jointly and severally in the case of Co-Sureties, unto HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION AND INFRASTRUCTURE, as Oblige, hereinafter called the Oblige, _____ in _____ the _____ amount _____ of _____ Dollars (\$ _____), lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety bind themselves or Co-Sureties as the case may be, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a contract with the Oblige, dated the 13th day of December 20 19 for HIGHWAY 91/17 UPGRADE PROJECT which Contract Documents are by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, the conditions of this obligation are such that if the Principal shall well and faithfully observe and perform all the obligations on the part of the Principal to be observed and performed in connection with the Contract, then this obligation shall be void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

- (1) Whenever the Principal shall be, and declared by the Oblige to be, in default under the contract, the Surety or Co-Sureties as the case may be shall
 - (a) if the work is not taken out of the Principal's hands, remedy the default of the Principal,
 - (b) if the work is taken out of the Principal's hands, and the Oblige directs the Surety or Co-Sureties as the case may be to undertake the completion of the work, complete the work in accordance with the Contract provided that a contract is entered into for the completion of the work
 - (i) it shall be between the Surety and Co-Sureties as the case may be and the completing contractor, and
 - (ii) the selection of such completing contractor shall be subject to the approval of the Oblige,
 - (c) if the work is taken out of the Principal's hands and the Oblige, after reasonable notice to the Surety or Co-Sureties as the case may be, does not direct the Surety or Co-Sureties as the case may be to undertake the completion of the work, assume the financial responsibility for the cost of completion in excess of the moneys available to the Oblige under the Contract,
 - (d) be liable for and pay all the excess costs of completion of the Contract, and
 - (e) not be entitled to any Contract moneys earned by the Principal, up to the date of Principal's default on the Contract and any holdbacks relating to such earned Contract moneys held by the Oblige, and the liability of the Surety or Co-Sureties as the case may be under this Bond shall remain unchanged provided, however, and without restricting the generality of the foregoing, upon the completion of the Contract to the satisfaction of the Oblige, any Contract moneys earned by the Principal or holdbacks related thereto held by the Oblige may be paid to the Surety or Co-Sureties as the case may be by the Oblige.
- (2) The Surety or Co-Sureties as the case may be shall not be liable for a greater sum than the amount specified in this Bond.
- (3) No suit or action shall be instituted by the Oblige herein against the Surety or Co-Sureties as the case may be pursuant to these presents after the expiration of two (2) years from the date on which final payment under the Contract is payable.
- (4) If this Bond is issued by Co-Sureties, then the Co-Surety that signs the first signature block on this Bond shall be designated as the "Lead Surety" for the purposes of this Bond and the Co-Sureties hereby jointly and severally irrevocably: appoint and authorize the Lead Surety to act as the sole representative of and agent for the Co-Sureties, and with authority to bind the Co-Sureties, in all dealings and matters between the Co-Sureties and the Oblige and/or the Principal arising from or relating to this Bond, including without limitation the receipt on behalf of the Co-Sureties of any notices, directions, demands or draws on or given under this Bond issued by the Oblige and in the investigation, payment, compromise, settlement and defence of any claims, disputes, demands and draws on, arising from or related to this Bond; and, agree and acknowledge that the Oblige and/or Principal shall be entitled to assume that any act done, document executed or entered into or waiver given by the Lead Surety to the Oblige and/or Principal arising from or related to this Bond has been duly

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 14: SPECIMEN BONDS**

**Commercial in Confidence
Execution**

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authorized by each Co-Surety and is binding upon each Co-Surety without the Obligee and/or the Principal being under any obligation to enquire into the authority of the Lead Surety in such matters.

IN WITNESS WHEREOF, the Principal and the Surety or Co-Sureties as the case may be have Signed and Sealed this bond this _____ day of _____, 20 _____.

**[IF MORE THAN ONE SURETY ADD SIGNATURE
BLOCKS AS APPROPRIATE FOR EACH AND EVERY
CO-SURETY OBLIGATED UNDER THIS BOND. THE
FIRST SURETY SIGNATURE BLOCK IS FOR THE
LEAD SURETY]**

SIGNED and SEALED

In the presence of:

For the Design-Builder

SEAL

For the Surety Attorney-in-fact

SEAL

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SPECIMEN - LABOUR AND MATERIAL PAYMENT BOND

NO. _____

• Dollars (\$•)

Note: This Bond is issued simultaneously with another Bond in favour of the Obligee conditioned for the full and faithful performance of the contract.

KNOW ALL PERSONS BY THESE PRESENTS THAT PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP as Principal, hereinafter called the Principal, and (SURETY/INSURANCE COMPANY NAME(S) AND ADDRESS(ES)) a corporation or corporations created and existing under the laws of Canada, and duly authorized to transact the business of Suretyship in Canada, as Surety, hereinafter called the Surety if one Surety is named in this Bond and the Co-Sureties if more than one, is/are, subject to the conditions hereinafter contained, held and firmly bound, jointly and severally in the case of Co-Sureties, unto HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA AS REPRESENTED BY THE MINISTER OF TRANSPORTATION AND INFRASTRUCTURE, as Obligee, hereinafter called the Obligee, for the use and benefit of the Claimants, their and each of their heirs, executors, administrators, successors and assigns, in _____ the _____ amount _____ of _____ Dollars (\$ _____) of lawful money of Canada, for the payment of which sum, well and truly to be made, the Principal and the Surety or Co-Sureties as the case may be bind themselves, their heirs, executors, administrators, successors and assigns, jointly and severally, firmly by these presents.

WHEREAS, the Principal has entered into a written contract with the Obligee, dated the 13th day of December 20 19 for HIGHWAY 91/17 UPGRADE PROJECT which Contract Documents are by reference made a part hereof, and is hereinafter referred to as the Contract.

NOW, THEREFORE, THE CONDITION OF THIS OBLIGATION is such that, if the Principal shall make payment to all Claimants for all labour and material used or reasonably required for use in the performance of the Contract, then this obligation shall be null and void; otherwise it shall remain in full force and effect, subject, however, to the following conditions:

1. A Claimant for the purpose of this Bond is defined as one having a direct contract with the Principal for labour, material, or both, used or reasonably required for use in the performance of the Contract, labour and material being construed to include that part of water, gas, power, light, heat, oil, gasoline, telephone service or rental equipment directly applicable to the Contract provided that a person, firm or corporation who rents equipment to the Principal to be used in the performance of the Contract under a contract which provides that all or any part of the rent is to be applied towards the purchase price thereof, shall only be a Claimant to the extent of the prevailing industrial rental value of such equipment for the period during which the equipment was used in the performance of the Contract. The prevailing industrial value of equipment shall be determined, insofar as it is practical to do so, in accordance with and in the manner provided for in the latest revised edition of the publication of the Canadian Construction Association titled "Rental Rates on Contractors Equipment" published prior to the period during which the equipment was used in the performance of the Contract.
2. The Principal and the Surety or Co-Sureties as the case may be, hereby jointly and severally agree with the Obligee, that every Claimant who has not been paid as provided for under the terms of their contract with the Principal, before the expiration of a period of ninety (90) days after the date on which the last of such Claimant's work or labour was done or performed or materials were furnished by such Claimant, sue on this Bond, prosecute the suit to final judgment for such sum or sums as may be justly due to such Claimant under the terms of their contract with the Principal and have execution thereon. Provided that the Obligee is not obliged to do or take any act, action or proceeding against the Surety or Co-Sureties as the case may be on behalf of the Claimants, or any of them, to enforce the provisions of this Bond. If any act, action or proceeding is taken either in the name of the Obligee or by joining the Obligee as a party to such proceeding, then such act, action or proceeding, shall be taken on the understanding and basis that the Claimants, or any of them, who take such act, action or proceeding shall indemnify and save harmless the Obligee against all costs, charges and expenses or liabilities incurred thereon and any loss or damage resulting to the Obligee by reason thereof. Provided still further that, subject to the foregoing terms and conditions, the Claimants, or any of them, may use the name of the Obligee to sue on and enforce the provisions of this Bond.

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3. No suit or action shall be commenced hereunder by any Claimant:
 - (a) unless such Claimant shall have given written notice within the time limits hereinafter set forth to each of the Principal, the Surety or Co-Sureties as the case may be and the Oblige, stating with substantial accuracy the amount claimed. Such notice shall be served by mailing the same by registered mail to the Principal, the Surety and the Oblige, at any place where an office is regularly maintained for the transaction of business by such persons or served in any manner in which legal process may be served in the Province or other part of Canada in which the subject matter of the Contract is located. Such notice shall be given
 - (1) in respect of any claim for the amount or any portion thereof, required to be held back from the Claimant by the Principal, under either the terms of the Claimant's contract with the Principal or under the Builder's Liens Legislation applicable to the Claimant's contract with the Principal whichever is the greater, within one hundred and twenty (120) days after such Claimant should have been paid in full under the Claimant's contract with the Principal.
 - (2) in respect of any claim other than for the holdback, or portion thereof, referred to above, within one hundred and twenty (120) days after the date upon which such Claimant did, or performed, the last of the work or labour or furnished the last of the materials for which such claim is made, under the Claimant's contract with the Principal;
 - (b) after the expiration of one (1) year following the date on which the Principal ceased work on the contract, including work performed under the guarantees provided in the contract.
 - (c) other than in a Court of competent jurisdiction in a Province or Territory of Canada in which the subject matter of the contract, or any part thereof, is situated and not elsewhere, and the parties hereto agree to submit to the jurisdiction of such Court.
4. The Surety or Co-Sureties as the case may be agrees not to take advantage of Article 2365 of the Civil Code of the Province of Quebec in the event that, by an act or an omission of a Claimant, the Surety or Co-Sureties as the case may be can no longer be subrogated in the rights, hypothecs and privileges of said Claimant.
5. The amount of this Bond shall be reduced by, and to the extent of any payment or payments made in good faith, and in accordance with the provisions hereof, inclusive of the payment by the Surety or Co-Sureties as the case may be of builders liens which may be filed of record against the subject matter of the Contract, whether or not claim for the amount of such lien be presented under and against this Bond.
6. The Surety or Co-Sureties as the case may be shall not be liable for a greater sum than the specified penalty of this Bond.
7. If this Bond is issued by Co-Sureties, then the Co-Surety that signs the first signature block on this Bond shall be designated as the "Lead Surety" for the purposes of this Bond and the Co-Sureties hereby jointly and severally irrevocably: appoint and authorize the Lead Surety to act as the sole representative of and agent for the Co-Sureties, and with authority to bind the Co-Sureties, in all dealings and matters between the Co-Sureties and the Oblige, Principal and/or any Claimant(s) arising from or relating to this Bond, including without limitation the receipt on behalf of the Co-Sureties of any directions, notices, demands or draws on or given under this Bond issued by the Oblige and/or any Claimant(s) and in the investigation, payment, compromise, settlement and defence of any claims, demands and draws on, arising from or related to this Bond; and, agree and acknowledge that the Oblige, the Principal and/or any Claimant(s) shall be entitled to assume that any act done, document executed or entered into or waiver given by the Lead Surety to the Oblige, the Principal and/or the Claimant(s) arising from or related to this Bond has been duly authorized by each Co-Surety and is binding upon each Co-Surety without the Oblige, Principal and/or the Claimant(s) being under any obligation to enquire into the authority of the Lead Surety in such matters.

**HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 14: SPECIMEN BONDS**

*Commercial in Confidence
Execution*

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IN WITNESS WHEREOF, the Principal and the Surety or Co-Sureties as the case may be have Signed and Sealed this Bond
this _____ day of _____ 20____

**[IF MORE THAN ONE SURETY ADD SIGNATURE
BLOCKS AS APPROPRIATE FOR EACH AND EVERY
CO-SURETY OBLIGATED UNDER THIS BOND. THE
FIRST SURETY SIGNATURE BLOCK IS FOR THE
LEAD SURETY]**

SIGNED and SEALED

In the presence of:

For the Principal

SEAL

For the Surety Attorney-in-fact

SEAL

**SCHEDULE 15
INSURANCE REQUIREMENTS**

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**PART 1
INSURANCE REQUIRED - CONSTRUCTION**

1.1 Third Party Liability Insurance - Construction

- (a) From and including the Effective Date and through to and including the Substantial Completion Date, “Wrap-Up” Commercial General Liability insurance with inclusive limits of not less than _____, for bodily injury, death, and property damage arising from any one accident or occurrence and in the annual aggregate. The insurance policy will pay on behalf of the named insureds and the additional named insureds under the policy for any sum or sums which the insureds may become liable to pay or shall pay for bodily injury, death or property damage or for loss of use thereof, arising out of or resulting from the work or operations of the Design-Builder or the Subcontractors of any tier, and including all persons, firms, corporations or partnerships who perform any of the Project Work contemplated by this Agreement, anywhere within Canada and the USA. In addition to the above limits, such liability insurance will also pay all costs, charges, and expenses in connection with any claims that may require to be contested by the insureds anywhere within Canada and the USA.
- (b) From and including the Effective Date and through to and including the Substantial Completion Date, if ships, boats or other vessels are used in the performance of the Project Work contemplated by this Agreement and are owned, leased, rented, operated or used by the Design-Builder or any Subcontractor, then for bodily injury or death and property damage arising from any one accident or occurrence for all ships, boats and other vessels, insurance coverage is to be provided through either:
- (i) the “Wrap-Up” Commercial General Liability Insurance policy referred to in Section 1.1(a) of this Schedule; or
 - (ii) a separate Protection and Indemnity insurance policy or such other policy or policies or combination thereof appropriate for this risk in the context of the Project, in any case with limits of not less than _____ for bodily injury or death and property damage arising from any one accident or occurrence and in the term aggregate.

The Design-Builder will be responsible for ensuring that any changes to the requirements of the *Marine Liability Act* (Canada) and/or the regulations of the *Marine Liability Act* (Canada) are reflected in the insurance coverage provided.

- (c) From and including the Effective Date and through to and including the Substantial Completion Date, if aircraft (including helicopters) are used in the performance of the Project Work contemplated by this Agreement and are owned, leased, rented, operated or used by the Design-Builder or any Subcontractor, then third party Aircraft liability coverage with limits of not less than _____ for bodily injury or death and property damage arising from any one accident or occurrence and in the annual aggregate must be provided, together with a waiver of subrogation on the hull.
- (d) From and including the Effective Date and through to and including the Substantial Completion Date, if unmanned air vehicles (UAV) are used in the performance of the Project Work contemplated by this Agreement and are owned, leased, rented, operated or

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used by the Design-Builder or any Subcontractor, then third party Aircraft liability coverage with limits of not less than _____ for bodily injury or death and property damage arising from any one accident or occurrence and in the annual aggregate. This coverage may be provided by a separate policy or with the Wrap-Up Commercial General Liability policy referred to in Section 1.1(a) of this Schedule. All UAV movements to comply with all Transport Canada requirements, including the requirement to obtain, and comply with, a Transport Canada “Special Flight Operation Certificate”.

(e) Extensions of Coverage

The liability insurance referred to in Sections 1.1(a), (b) and (c) of this Schedule will cover liability assumed by the Design-Builder in connection with and applicable to this Agreement and will include the following coverage extensions applicable to the following liability policies:

- (i) Coverage Extensions Applicable to the “Wrap-Up” Commercial General Liability Policy
 - Canada and USA coverage territory
 - Products/Completed Operations
 - Occurrence Property Damage
 - Broad Form Property Damage
 - Broad Form Completed Operations
 - Contingent Employers Liability
 - Medical Payments
 - Incidental Medical Malpractice
 - Blanket Written Contractual
 - Cross Liability
 - Attached Machinery
 - Non Owned Automobile
 - Legal Liability for damage to hired automobiles
 - Hazardous Operations (XCU)
 - Products and Completed Operations (as more fully outlined under Section 1.5(b) of this Schedule)
 - Sudden and Accidental Pollution Coverage with a limit not less than _____ in accordance with the Insurance Bureau of Canada’s sudden and accidental pollution coverage endorsement, subject to
 - 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 1.6 of this Schedule)
 - Blanket Additional Insureds
- (ii) Coverage Extensions Applicable to the Marine and Aviation Policies
 - Canada and USA coverage territory
 - 60 days notice of Cancellation or Limitation of cover (as more fully outlined under Section 1.6 of this Schedule)

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(f) **Inclusions / Exclusions Not Permitted**

The following inclusions/exclusions are not permitted for any insurance referred to in Sections 1.1(a), (b) and (c) of this Schedule, except in the case of any insurance referred to in Sections 1.1(b) and (c) of this Schedule where such insurance is obtained under policies that are separate from the policy for the insurance referred to in Section 1.1(a) of this Schedule, as such separate policies are described in Sections 1.1(b) and 1.1(c) of this Schedule:

- (i) Hazardous operations, including excavation, pile driving, shoring, blasting, under-pinning or demolition work or any other operation or work to be performed as part of or in the course of the Project Work will not be excluded from insurance coverage.
- (ii) Claims arising out of the legal liability imposed upon the insured at common law and/or by statute for bodily injury or death to employees of the insured will not be excluded. However, exclusions applicable to liability imposed upon or assumed by the insured under Health and Safety Laws or for assessment by any Workers Compensation Board will be permitted.
- (iii) Liability assumed by the insureds under contract with railroad companies for the use and operation of railway sidings or crossings will not be excluded.
- (iv) Liability arising out of all products where the Design-Builder supplies the material will not be excluded.
- (v) Tort liability assumed by the Design-Builder under this Agreement will not be excluded.
- (vi) Exclusions for design/build, design/build/finance, design/build/finance/operate, or joint venture projects will not be permitted.
- (vii) Other types of services not listed above, to be performed by or on behalf of the Design-Builder under this Agreement will not be excluded.

(g) **Deductible**

A maximum deductible on the primary insurance policy will be allowed for any one accident or per occurrence of up to _____.

(h) **Self-Insured Retention**

A maximum self-insured retention of up to _____ for any one accident or per occurrence will be permitted for the Design-Builder providing umbrella/excess liability insurance subject to having a minimum primary insurance policy of _____ underlying the umbrella/excess.

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1.2 Professional Liability Insurance (Errors & Omissions)

- (a) Single Project Specific Professional Liability insurance with minimum limits of _____ per claim and _____ term aggregate insuring against all insured loss or damage including coverage for third party property damage, bodily injury or death, arising out of any professional services rendered by the Design-Builder or the Subcontractors, and/or any engineers, architects, surveyors, and any of their respective employees including personnel on loan to the Design-Builder or the Subcontractors and personnel who perform normal services of the Design-Builder under this Agreement. The named insured shall also include all architectural firms and all engineering firms, including project managers, construction managers and applied science technologists, and all land surveyors, quantity surveyors and others engaged in providing professional services to the Project.
- (b) Coverage will be maintained:
- (i) From and including the Effective Date and, subject to Section 1.2(b)(ii) of this Schedule, for a period of at least 24 months after the Substantial Completion Date; and
 - (ii) in the case of any Project Work carried out by the Design-Builder after the Substantial Completion Date, for a period of at least 24 months following completion of the work that is the subject of the Project Work;
- provided that coverage shall not be required to be maintained for longer than _____ years after the effective date of the policy.
- (c) A maximum deductible of _____ will be allowed.
- (d) Exclusions for design/build, design/build/finance, design/build/finance/operate, or joint venture projects will not be permitted.
- (e) The insurance referred to in this Section 1.2 [Professional Liability Insurance (Errors & Omissions)] of this Schedule shall not be cancelled, removed, or endorsed to restrict coverage or limits of liability, without 60 days' notice in writing by registered mail to the Province's Representative with a copy by registered mail to "The Corporate Insurance and Bonds Manager" at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN PROV GOVT, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise).
- (f) The insurance referred to in this Section 1.2 [Professional Liability Insurance (Errors & Omissions)] of this Schedule will be effected on the Effective Date but shall have a "retroactive date" (as such term is understood by the insurance industry with respect to "claims made" policies) to coincide with the verifiable start of design for any work covered by such insurance, such verification to be the sole responsibility of the Design-Builder.

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1.3 Automobile Insurance

From and including the Effective Date and through to and including the Substantial Completion Date, Automobile Liability coverage providing third party liability and accident benefits insurance coverage must be provided for all vehicles required by law to be licensed that are owned, leased or rented by the Design-Builder or any Subcontractor and are used in the performance of the Project Work contemplated by this Agreement, with limits of not less than _____ for vehicles owned, leased or rented by the Design-Builder, and limits of not less than _____ for vehicles owned, leased or rented by any other Subcontractor.

1.4 Property Insurance

(a) Builders' Risk

From and including the Effective Date and through to and including the Substantial Completion Date, Builders' Risk Property Insurance insuring against all risks (including but not limited to structural collapse and transit risks by any conveyance to and/or from the site, while there, awaiting and/or during erection, installation and testing, occurring anywhere within Canada and the United States, but specifically not including earthquake or flood) of direct physical loss of or damage to (including full resultant loss or damage) all Project Infrastructure (including all Structures forming part thereof) including the value of any material and/or structure and/or property destined for or entering into or forming part of the Project Infrastructure, whether belonging to the Design-Builder or any of the Subcontractors and/or the Province and/or BCTFA and/or the engineers and/or otherwise and including automatically any changes in design or method of construction occurring during the term of the policy, such insurance to specify a policy limit of not less than _____. The Design-Builder shall cause to be completed a PML study on or before 30 days following the Effective Date, the form, content and provider of such PML study all to be acceptable to the Province, acting reasonably. Should such PML study find that a policy limit of _____ is insufficient for such insurance, the Design-Builder shall, on or before 30 days following the Province's acceptance of the PML study, obtain such insurance with the policy limit as specified in the PML study.

(b) Equipment Insurance

From and including the Effective Date and through to and including the Substantial Completion Date, "All Risks" Equipment Insurance, including flood and waterborne coverages, satisfactory to the Province covering all Construction Plant, including Construction Plant owned, rented or leased by the Design-Builder or any Subcontractor and used in the performance of any Project Work or for which the Design-Builder may be responsible.

(c) Deductibles Per Occurrence

All losses under the Builders' Risk Property Insurance or the Equipment Insurance - up to _____ per occurrence.

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(d) Waiver of Subrogation/Builders' Risk Insurance

The following Waiver of Subrogation is to be added to the Builders' Risk Property Insurance Policies:

“In the event of any physical loss or damage to property, the settlement or payment of the subsequent claim shall be made without the right of subrogation against Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the employees, agents and servants of Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the architects, engineers, consultants or contractors of Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the servants, agents, employees, volunteers, directors, or parent, subsidiary, affiliated or related firms of any such architects, engineers, consultants or contractors, engaged in or connected with the design, construction and related operations known as the “Highway 91/17 Upgrade Project”.”

(e) Waiver of Subrogation / Equipment Insurance

The following Waiver of Subrogation is to be added to the equipment insurance policies:

“In the event of any physical loss or damage to equipment of Pacific Gateway Constructors General Partnership or any of its contractors or subcontractors, the settlement or payment of the subsequent claim shall be made without the right of subrogation against Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the employees, agents and servants of Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the architects, engineers, consultants or contractors of Her Majesty the Queen in right of the Province of British Columbia or the BC Transportation Financing Authority, or any of the servants, agents, employees, volunteers, directors, or parent, subsidiary, affiliates or related firms of any such architects, engineers, consultants or contractors, engaged in or connected with the design, construction and related operations known as the “Highway 91/17 Upgrade Project”.”

1.5 Additional Conditions In Property and Liability Policies in this Part

- (a) The Province and BCTFA will be named as additional named insureds in all policies for the property insurance referred to in Section 1.4(a) of this Schedule by an endorsement as follows:

“Her Majesty the Queen in Right of the Province of British Columbia and the BC Transportation Financing Authority are added as Additional Named Insureds.”

- (b) Notwithstanding any other terms, conditions or exclusions elsewhere in the policies or in this Schedule, it is understood and agreed that all policies for the liability insurance referred to in Section 1.1(a) of this Schedule shall be extended to include insurance coverages and clauses as follows:

“Her Majesty the Queen in Right of the Province of British Columbia and the BC Transportation Financing Authority, together with all their employees, agents and

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servants, and all architects, engineers, consultants, contractors and any of their servants, agents, employees, volunteers, directors, parent, subsidiary, affiliated or related firms, engaged in or connected with the design, construction and related operations known as the "Highway 91/17 Upgrade Project" (all the foregoing being referred to in this Section as "Additional Named Insureds"), are added as additional named insureds in respect of liability arising from the work or operations of the Insured and the Additional Named Insureds, in connection with contracts entered into between the Insured and the Additional Named Insureds.

The insurance provided by this policy shall apply in the same manner and to the same extent as though a separate policy had been issued to each Insured and Additional Named Insured. Any breach of a condition of the policy by any Insured or Additional Named Insured shall not affect the protection given by this policy to any other Insured or Additional Named Insured. The inclusion herein of more than one Insured and Additional Named Insured shall not operate to increase the limit of liability under this policy.

Products and Completed Operations Hazard coverage shall be provided and such cover shall remain in full force and effect for a period of _____ after the work has been completed, irrespective of the expiry date of the policy."

1.6 Cancellation/Limitation

- (a) The insurance coverages referred to in this Part (except owned automobile insurance and professional liability insurance) shall not be cancelled, removed, or endorsed to restrict coverage or limits of liability, without 60 days' notice in writing by registered mail to the Province's Representative with a copy by registered mail to "The Corporate Insurance and Bonds Manager" at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN PROV GOVT, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise), except in the case of non-payment of premiums, in which case the minimum statutory notice requirements shall apply. In the case of Marine and Aviation Policies the Design-Builder shall use all reasonable efforts to fulfill the 60 days' notice requirement, but if, after using all reasonable efforts, the Design-Builder cannot fulfill the 60 days' notice requirement, the notice requirement in this subsection for Marine and Aviation Policies may be reduced to not less than 30 days.
- (b) The insurance coverages referred to in this Part shall not be lapsed without at least 30 days' notice in writing by registered mail to the Province's Representative with a copy by registered mail to "The Corporate Insurance and Bonds Manager" at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN PROV GOVT, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise).

1.7 Loss Payable

The insurance policies under Section 1.4(a) of this Schedule must contain a loss payable clause directing payment in accordance with the provisions of Section 6.18 [Application of Proceeds of Insurance] of this Agreement.

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1.8 Use and Occupancy

Use and occupancy of any Project Infrastructure or any part thereof prior to any applicable date of completion shall not be cause for any termination of insurance coverage shown in the applicable sections of this Part.

PART 2 INSURANCE REQUIRED – OPERATION AND MAINTENANCE

2.1 Insurance - Operation and Maintenance

For any Operation and Maintenance activities that are not covered under the insurances provided in Part 1 [Insurance Required – Construction] of this Schedule, the Design-Builder shall maintain, from and including the Effective Date and through to and including the Substantial Completion Date, the following:

- (a) Third Party Liability Insurance consistent with the coverages, extensions of coverage and endorsements set out in Section 1.1 [Third Party Liability Insurance – Construction] of this Schedule, with limits of not less than
- (b) Automotive Liability Insurance consistent with the coverages and endorsements set out in Section 1.3 [Automobile Insurance] of this Schedule, with limits of not less than
; and
- (c) Equipment Insurance consistent with the coverages and endorsements set out in Section 1.4(b) of this Schedule.

2.2 Additional Conditions in Liability Policies in this Part

Notwithstanding any other terms, conditions or exclusions elsewhere in the policies or in this Schedule, it is understood and agreed that all policies for the liability insurance referred to in Section 2.1(a) of this Schedule shall be extended to include insurance coverages and clauses as follows:

“Her Majesty the Queen in Right of the Province of British Columbia and the BC Transportation Financing Authority, together with all their employees, agents and servants, and all architects, engineers, consultants, contractors and any of their servants, agents, employees, volunteers, directors, parent, subsidiary, affiliated or related firms, engaged in or connected with the design, construction and related operations known as the “Highway 91/17 Upgrade Project” (all the foregoing being referred to in this Section as “Additional Named Insureds”), are added as additional named insureds in respect of liability arising from the work or operations of the Insured and the Additional Named Insureds, in connection with contracts entered into between the Insured and the Additional Named Insureds.

The insurance provided by this policy shall apply in the same manner and to the same extent as though a separate policy had been issued to each Insured and Additional Named Insured. Any breach of a condition of the policy by any Insured or Additional Named Insured shall not affect the protection given by this policy to any other Insured or Additional Named Insured. The inclusion herein of more than one Insured and Additional Named Insured shall not operate to increase the limit of liability under this policy.

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Products and Completed Operations Hazard coverage shall be provided and such cover shall remain in full force and effect for a period of _____ after the work has been completed, irrespective of the expiry date of the policy.”

2.3 Cancellation/Limitation

- (a) The insurance coverages referred to in this Part (except owned automobile insurance) shall not be cancelled, removed, or endorsed to restrict coverage or limits of liability, without 60 days’ notice in writing by registered mail to the Province’s Representative with a copy by registered mail to “The Corporate Insurance and Bonds Manager” at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN PROV GOVT, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise), except in the case of non-payment of premiums, in which case the minimum statutory notice requirements shall apply. In the case of Marine and Aviation Policies the Design-Builder shall use all reasonable efforts to fulfill the 60 days’ notice requirement, but if, after using all reasonable efforts, the Design-Builder cannot fulfill the 60 days’ notice requirement, the notice requirement in this subsection for Marine and Aviation Policies may be reduced to not less than 30 days.
- (b) The insurance coverages referred to in this Part shall not be lapsed without at least 30 days’ notice in writing by registered mail to the Province’s Representative with a copy by registered mail to “The Corporate Insurance and Bonds Manager” at Ministry of Transportation and Infrastructure, P.O. Box 9850 STN PROV GOVT, 4th Floor, 940 Blanshard Street, Victoria, BC, V8W 9T5 (or at such other address as the Province may from time to time by notice to the Design-Builder advise).

2.4 Use and Occupancy

Use and occupancy of any Project Infrastructure or any part thereof prior to any applicable date of completion shall not be cause for any termination of insurance coverage shown in the applicable sections of this Part.

PART 3 GENERAL PROVISIONS

3.1 Project Work after the Substantial Completion Date

- (a) The insurance described in this Schedule shall apply *mutatis mutandis* in connection with any Project Work carried out after the Substantial Completion Date and any warranty period extending beyond the Substantial Completion Date, in each case until completion of the relevant part of the Project Work, provided that the Province shall have the right to make, and the Design-Builder shall comply with, any reasonable variations in such insurance requirements, including adjustments in policy limits and additions of coverages in connection with any particular part of the Project Work.
- (b) Any variations made by the Province as contemplated in Section 3.1(a) of this Schedule shall not impose more stringent or less stringent requirements than those imposed by the Province for contracts of a similar nature or value to the relevant part of the Project Work undertaken after the Substantial Completion Date and any warranty period extending

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beyond the Substantial Completion Date and shall be based on the Province's assessment of the risks involved, based on the then current version of the Ministry Form INS152 or INS172, as appropriate. If the Design-Builder disputes the Province's assessment of the relevant risks and any resulting variation to the insurance requirements under this Section with respect to any particular part of the Project Work, the Design-Builder shall notify the Province of its dispute within 10 Business Days after the Province has notified the Design-Builder of the insurance requirements that shall apply to the relevant part of the Project Work. If the Province and the Design-Builder have not resolved the dispute within 10 Business Days after the Design-Builder's notice of disagreement, the dispute shall be referred for resolution under the Dispute Resolution Procedure. If the Province does not propose any variation or adjustment to the insurance requirements in respect of any particular part of the Project Work, then the insurance described in this Schedule shall be required.

3.2 Amendments to Insurance Coverages

The Province may from time to time, acting reasonably, and on written notice to the Design-Builder, amend or vary the insurance coverages described in Parts 1 or 2 of this Schedule, including by adjusting the policy limits and by changing the scope of coverages. Any such amendment will be considered a Province Change unless the amendment or variation is contemplated by the other provisions of this Schedule.

3.3 Primary and Excess Coverage

The Design-Builder may satisfy limit requirements through the use of primary and excess insurance programs.

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PART 1
GENERAL

1.1 Resolution of Disputes

- (a) Each of the Province and the Design-Builder agrees that it shall at all times, provide frank, candid and timely disclosure of all relevant facts, information and documents to facilitate the resolution of any dispute and shall make bona fide efforts to:
 - (i) resolve by amicable negotiations any and all disputes arising between the Province and the Design-Builder;
 - (ii) resolve all disputes at the lowest level of management possible; and
 - (iii) exhaust all reasonable efforts to resolve a dispute at all available levels of management, including escalation to the senior executive levels of the Province and the Design-Builder where the dispute is not resolved at lower levels of management, before issuing a notice pursuant to Section 1.1(b) of this Schedule to refer the dispute to any of the escalated dispute resolution processes available pursuant to and in accordance with Part 2 [Referral to Expert Referee], Part 3 [Referral to Expert Panel], Part 4 [Referral to Arbitration] and Part 5 [Court Proceedings] of this Schedule.
- (b) If the Province and the Design-Builder are unable to resolve a dispute pursuant to Section 1.1(a) of this Schedule within 10 Business Days of the dispute having been identified as such by the Province or the Design-Builder, then for any dispute described in Section 18.1 [Dispute Resolution Procedure] a party may deliver to the Design-Builder or the Province's Representative, as applicable:
 - (i) where the parties have each waived in writing their right to have a dispute determined by an Expert Referee or an Expert Panel, an Arbitration Dispute Notice issued pursuant to Part 4 [Referral to Arbitration] of this Schedule;
 - (ii) when, pursuant to Section 2.1 of this Schedule, it is reasonably determined that the expected value of a determination of a dispute is less than \$200,000, an Expert Referee Dispute Notice issued pursuant to Part 2 [Referral to Expert Referee] of this Schedule; or
 - (iii) when, pursuant to Section 3.1 of this Schedule, it is reasonably determined that the expected value of a determination of a dispute is equal to or greater than \$200,000, an Expert Panel Dispute Notice issued pursuant to Part 3 [Referral to Expert Panel] of this Schedule.

To be effective, any such notice must expressly state that it is an Arbitration Dispute Notice, Expert Referee Dispute Notice or Expert Panel Dispute Notice, as the case may be, set out the particulars of the matter in dispute, describe the remedy or resolution sought by the party issuing such notice, and comply with any other requirements provided in this Schedule as well as the notice requirements under Section 18.5 [Notices].

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1.2 No Joinder

No proceedings to resolve any dispute arising out of or relating to this Agreement in accordance with this Schedule shall include, by consolidation or joinder or in any other manner, any additional person not a party to this Agreement, including any Subcontractor, except with the written consent of the parties to this Agreement and any other person sought to be so joined.

1.3 Survival

Notwithstanding any other provision of this Agreement, the provisions of this Schedule will survive the expiry or any earlier termination of this Agreement.

1.4 Limitation Defences

The parties acknowledge and agree that the running of time in relation to a particular dispute as it may apply to any and all defences that are based on the lapse of time, including those prescribed by the *Limitation Act* (British Columbia), will be suspended from the date an Expert Panel Dispute Notice is issued in accordance with Section 3.1 [Referral to Expert Panel] of this Schedule until 60 days after either a decision is rendered by the Expert Panel or the parties receive a notification from the Expert Panel of its inability to achieve a unanimous decision, each in accordance with Section 3.9 [Decision of Expert Panel] of this Schedule. For the avoidance of doubt, the suspension of time in accordance with this Section 1.4 does not apply to the running of time in relation to any time period associated with the process and procedure provided under Part 3 [Referral to Expert Panel] of this Schedule.

PART 2 REFERRAL TO EXPERT REFEREE

2.1 Referral to Expert Referee

If the Province and the Design-Builder are unable to resolve a dispute in the manner contemplated in Section 1.1(a) of this Schedule and it is reasonably determined by the initiating party that the expected value of a determination of the dispute is less than \$200,000 (index linked) then a party may by written notice to the other party (the “**Expert Referee Dispute Notice**”) require the dispute to be resolved on an expedited basis by an appointed referee (the “**Expert Referee**”). If the other party does not give a notice of objection (“**Notice of Objection to Expert Referee**”) to the initiating party within two Business Days following the delivery of the Expert Referee Dispute Notice, then the parties will appoint an Expert Referee in the following manner to resolve the dispute and will participate in the resolution of the dispute as set out below:

- (a) within two Business Days of the delivery of an Expert Referee Dispute Notice, each party will submit in writing to the other party, the names of no more than two candidates for Expert Referee who are independent of the parties, experienced in the resolution of similar disputes and immediately available to perform the role of Expert Referee in respect of the dispute at hand;
- (b) if a party has an objection to a proposed candidate, it will give written notice of such objection with reasons to the other party; or
- (c) if for any reason within three Business Days of the delivery of an Expert Referee Dispute Notice, an Expert Referee has not been appointed, then either party may apply to the

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BCICAC for an arbitrator to be promptly appointed under its “Domestic Commercial Arbitration Rules of Procedure” to act as a Referee under this Agreement in relation to the dispute.

2.2 Expert Referee Agreement

The parties will enter into an agreement (the “**Expert Referee Agreement**”) with the Expert Referee to act as Expert Referee generally in the form attached as Appendix A [Expert Referee Agreement] to this Schedule, such agreement to be entered into no later than two Business Days after the Expert Referee’s appointment.

2.3 Procedure for Expert Referee Review

- (a) The Expert Referee will conduct an impartial review of the dispute in such manner as the Expert Referee thinks fit, including carrying out on site inspections and interviews with any persons that the Expert Referee thinks fit. The parties will comply with all reasonable requests from the Expert Referee for additional information, documents and access to personnel which the Expert Referee considers necessary for the review. Any submission or documentation in respect of the dispute provided to the Expert Referee by a party will also be provided to the other party.
- (b) The Expert Referee may, with the written approval of both parties, retain other professional persons or experts to assist with the review and will pay due regard to any request by either party for the Expert Referee to retain such other professional persons or experts.
- (c) The Expert Referee will not be obliged to conduct enquiries in the presence of the parties or receive submissions from the parties, except to the extent that the Expert Referee thinks fit, and may render a decision notwithstanding the failure of a party to participate in the proceedings.

2.4 Decision of the Expert Referee

- (a) The Expert Referee will render a brief, written, reasoned and impartial decision on the dispute, with copies to both parties within five Business Days of the signing by the Expert Referee and both parties of the Expert Referee Agreement referred to in Section 2.2 of this Schedule, or such longer period as agreed to in writing by both parties. The Expert Referee’s decision will be in the form of a proposed determination of the rights of the parties having regard to the Expert Referee’s understanding of the relevant contractual provisions, the applicable law and the facts as agreed by the parties or as best the Expert Referee is able to determine them.
- (b) Each party acknowledges the value of having the Expert Referee render a timely decision regarding the dispute. If the Expert Referee is unable to render a decision within the time set or as extended by mutual agreement of the parties, then the parties will request that the Expert Referee provide to the parties within such time such analysis of the dispute as the Expert Referee is able to make within that time and describe the further work the Expert Referee recommends would be required in order to arrive at a reasoned decision.

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- (c) A decision of an Expert Referee is not binding on the parties but is intended to assist the parties to reach agreement with respect to the dispute.

2.5 Confidentiality of Expert Referee

- (a) The proceedings under this Part 2 will be confidential and all information, data or documentation disclosed or delivered by either party to the Expert Referee as a result or in connection with the Expert Referee's duties as Expert Referee will be treated as confidential and neither the parties nor the Expert Referee will disclose to any person any such information, data or documentation unless the parties otherwise agree in writing. Nothing contained in this provision will prevent the submission in any subsequent proceedings of any evidence other than evidence that came into existence for the express purpose of submission to, or assistance of, the Expert Referee.
- (b) The proceedings by or before an Expert Referee will be without prejudice in any subsequent proceedings.

2.6 Costs of Expert Referee Review

Notwithstanding Section 9.1 [Indemnification by Design-Builder], Section 9.5 [Indemnification by the Province] and Section 9.6 [Limited Province Indemnity for Contamination], or any other provision of this Agreement, the Province and the Design-Builder shall each bear its own costs of the process for resolution of the dispute by the Expert Referee (including all legal fees and expenses). As between the Province and the Design-Builder, and notwithstanding the terms of the Expert Referee Agreement, the Province and the Design-Builder shall share equally, and be responsible for their respective share of all costs of the Expert Referee as and when due.

PART 3 REFERRAL TO EXPERT PANEL

3.1 Referral to Expert Panel

If

- (a) the Province and the Design-Builder are unable to resolve a dispute in the manner contemplated in Section 1.1(a) of this Schedule;
- (b) it is reasonably determined by the initiating party that the expected value of a determination of the dispute is greater than \$200,000 (index linked); or
- (c) a party delivers a Notice of Objection to Referee in accordance with Section 2.1 [Referral to Expert Referee] of this Schedule,

then a party may by written notice to the other party and the Expert Panel (the "**Expert Panel Dispute Notice**") require the dispute to be resolved on an expedited basis by a qualified and experienced Expert Panel, or where the parties both agree, by a single member of the Expert Panel, in accordance with this Part 3.

3.2 Expert Panel

- (a) The Province and the Design-Builder shall jointly appoint one panel of three experts (the “**Expert Panel**”) within 120 days following the Effective Date consisting of:
 - (i) at least one expert who shall have demonstrated experience with design or construction work, or both; and
 - (ii) at least one expert who shall be a barrister and solicitor duly licensed to practice law in the Province of British Columbia.
- (b) If any Expert Panel member resigns, dies or otherwise withdraws from the Expert Panel at any time, a replacement expert shall be appointed by the Province and the Design-Builder jointly as soon as practicable thereafter and in a manner consistent with the Expert Panel composition requirements provided for in this Section 3.2 and Section 3.4(a) of this Schedule.
- (c) If the Province and the Design-Builder fail to agree on the identity of any expert to be appointed to the Expert Panel pursuant to Section 3.2(a) of this Schedule within the 120 day period following the Effective Date or, pursuant to Section 3.2(b) of this Schedule, within a reasonable time, the Province or the Design-Builder may apply to the BCICAC or to a judge of the Supreme Court of the Province of British Columbia for appointment of such expert or experts, in which case the BCICAC or such Court shall appoint an expert or experts at the earliest opportunity from the list of potential experts submitted by the Province and the Design-Builder or, if a party fails to submit its list of potential experts within 10 days of applying to the BCICAC or to the Court, the BCICAC or such Court may appoint such person or persons as members of the Expert Panel who meet the requirements set out in this Schedule.
- (d) The parties will enter into an agreement (an “**Expert Panel Member Agreement**”) with each Expert Panel member to act as Expert Panel member generally in the form attached as Appendix B [Expert Panel Member Agreement] to this Schedule, such agreement to be entered into no later than two Business Days after the Expert Panel member’s appointment.

3.3 Retention Payments to Expert Panel Members

As between the Province and the Design-Builder, and notwithstanding the terms of the Expert Panel Member Agreement, the Design-Builder shall be responsible for the payment of retention payments to the members of the Expert Panel, in such amounts and at such times as determined by the parties, each acting reasonably.

3.4 No Conflict for Expert Panel Members

- (a) Unless the Province and the Design-Builder otherwise agree, no person shall be nominated or appointed to act as a member of the Expert Panel who, or any of whose partners, shareholders, unitholders or Affiliates:
 - (i) is or at any time has been involved or interested in the conduct of:

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- (A) any of the Project Work on behalf of the Design-Builder or any of its Subcontractors; or
- (B) the Project on behalf of the Province; or
- (ii) is a present or former Expert Referee.
- (b) The parties shall cause each expert appointed to the Expert Panel, as part of the documentation required to retain the Expert Panel member, to sign a statement declaring that the Expert Panel member knows of no circumstance likely to give rise to justifiable doubts as to his or her independence or impartiality and that he or she agrees to disclose any such circumstance to the parties should such circumstance arise after that time.

3.5 Appointment of Single Expert Panel Member

- (a) The parties may agree in writing to have a single, specific member of the Expert Panel resolve a particular dispute.
- (b) Upon the Expert Panel receiving a notice executed by both parties indicating the parties' agreement to have a specified Expert Panel member resolve a dispute, the specified Expert Panel member shall thereafter take conduct of the dispute.
- (c) Where a single member of the Expert Panel is jointly appointed by the parties in accordance with this Section 3.5, the provisions of this Schedule, including Sections 3.7 through 3.12 of this Part, will apply *mutatis mutandi* as though the single Expert Panel member were standing in the place of the Expert Panel.

3.6 Expert Panel Dispute Notice

The Expert Panel Dispute Notice will provide the following and be limited to 15 single-sided pages:

- (a) a summary of the issues in dispute and the position of the initiating party with respect to those issues;
- (b) the relief sought by the initiating party and, where applicable, particulars of any costs or damages claimed;
- (c) the specific provision(s) of this Agreement relied on by the initiating party in relation to its position; and
- (d) a list of any documentary, witness or other form of evidence that the initiating party intends to rely on in support of its position.

3.7 Response to Expert Panel Dispute Notice

Within 28 days following receipt of an Expert Panel Dispute Notice, the party receiving the Expert Panel Dispute Notice, hereafter and for the purposes of this Part 4 referred to as the responding party, shall submit to the initiating party and the Expert Panel a response to the Expert Panel Dispute Notice, which shall be limited to 15 single-sided pages in total and shall include:

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- (a) a summary of the responding party's position in response to the initiating party's claim;
- (b) identification of any additional related issues;
- (c) any relief sought by the responding party or, where applicable, the responding party's position with respect to any costs or damages claimed;
- (d) any provision(s) of this Agreement relied on by the responding party in relation to its position; and
- (e) a list of any documentary, witness or other form of evidence that the responding party intends to rely on in support of its position.

3.8 Procedure for Expert Panel Review

The procedure for an Expert Panel resolution process will be as follows:

- (a) Subject to Section 3.8(b), within 28 days following receipt of the responding party's response to the Expert Panel Dispute Notice and in consultation with the parties as required, the Expert Panel shall:
 - (i) determine the issues to be resolved;
 - (ii) determine what documents will need to be produced and by what date;
 - (iii) determine what witness evidence will be required and, if required, determine how it will be provided and any dates associated with securing such evidence;
 - (iv) determine if a physical site inspection is required and, if required, arrange a date for inspection;
 - (v) determine if any independent expert evidence will be required and, if required, how such evidence will be obtained and a date for submission; and
 - (vi) any other determinations required to allow the Expert Panel to conduct its investigation and render a decision with respect to the dispute.
- (b) The Expert Panel shall determine the appropriate process for the timely and cost effective resolution of the dispute and, without limiting the generality of the foregoing, have discretion to, among other things:
 - (i) solicit submissions and documents from the parties, and impose deadlines for the receipt of such submissions;
 - (ii) require a party to supply or prepare for examination by the Expert Panel and the other parties any document or written or oral information or evidence the Expert Panel considers necessary and provide any process associated therewith;
 - (iii) proceed with the Expert Panel process notwithstanding any failure or refusal of a party to comply with the provisions of this Part 3 or with the Expert Panel's

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directions or determinations or to attend any meeting or hearing, but only after giving such party reasonable notice that the Expert Panel intends to do so;

- (iv) convene meetings of the parties to have the parties discuss the issues in dispute in the presence of the Expert Panel;
- (v) provide process for the parties to communicate with the Expert Panel; and
- (vi) seek advice from any other qualified independent professional advisors in respect of the dispute,

all with the objective of devising and adopting the simplest, least expensive and most expeditious manner of determining the dispute in issue and the Expert Panel shall use all reasonable efforts to complete the Expert Panel's investigation of the dispute within six weeks of any determinations made in accordance with Section 3.8(a) of this Schedule.

- (c) Neither the Province nor the Design-Builder shall unreasonably delay or impede the Expert Panel in completing its investigation and determination with respect to any dispute and both parties acknowledge that the resolution process by the Expert Panel is intended to be based on an investigative process directed by the Expert Panel.

3.9 Decision of Expert Panel

- (a) The Expert Panel shall render a unanimous decision as soon as possible and, in any event, shall use all reasonable efforts to render a decision no later than 14 days after the Expert Panel has completed its investigations in accordance with Section 3.8 of this Schedule. The Expert Panel shall give written reasons or a written summary of reasons for the Expert Panel's decision.
- (b) Where the Expert Panel cannot reach a unanimous decision, the Expert Panel will notify the parties of its inability to achieve a unanimous decision no later than 14 days after the Expert Panel has completed its investigations in accordance with Section 3.8 of this Schedule, without providing any details with respect to the conflicting opinions of the Expert Panel members, and upon receipt of any such notification either of the parties may refer the matter to arbitration by issuing an Arbitration Dispute Notice in accordance with Part 4 [Referral to Arbitration] of this Schedule.

3.10 Confidentiality of Expert Panel

The parties shall cause each member of the Expert Panel, as part of the documentation required to retain the Expert Panel member, to agree to keep all information about the dispute confidential and to not disclose that information to anyone other than the parties and, as required, representatives and advisors of each of them or as required by the Expert Panel in accordance with Section 3.8(b)(vi), on an as-needed basis.

3.11 Costs of Expert Panel Review

Notwithstanding Section 9.1 [Indemnification by Design-Builder], Section 9.5 [Indemnification by the Province] and Section 9.6 [Limited Province Indemnity for Contamination], or any other provision of this Agreement and without limiting Section 3.3 [Retention Payments to Expert Panel Members] of

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this Schedule, the Province and the Design-Builder shall each bear its own costs of the process for resolution of the dispute by the Expert Panel (including all legal fees and expenses). As between the Province and the Design-Builder, and notwithstanding the terms of the Expert Panel Member Agreement, the Province and the Design-Builder shall share equally, and be responsible for their respective share of all costs of the Expert Panel as and when due.

3.12 Expert Panel Decision Binding

The Expert Panel's award or determination shall be final and binding on the parties unless and until revised, cancelled, varied or overturned by an Arbitrator or Court in accordance with the provisions of this Schedule, and each of the parties expressly waives all rights of appeal in connection with the Expert Panel's decision except as expressly provided in this Schedule.

PART 4 REFERRAL TO ARBITRATION

4.1 Referral to Arbitration

- (a) A party may commence arbitration proceedings in respect of a dispute by giving a written notice (the "**Arbitration Dispute Notice**") to another party requiring that the dispute be resolved by arbitration proceedings in accordance with this Part 4 where a dispute has arisen between the Province and the Design-Builder and one of the following applies:
- (i) the parties have referred the dispute for resolution through reference to an Expert Referee pursuant to Part 2 [Referral to Expert Referee] of this Schedule and the dispute is not completely resolved by agreement between the parties within 10 Business Days of the receipt of the Expert Referee's decision and a notice of objection ("**Notice of Objection to Arbitration**") is not delivered to the initiating party within five Business Days from receipt of the Arbitration Dispute Notice;
 - (ii) the parties have referred the dispute for resolution through reference to an Expert Panel pursuant to Part 3 [Referral to Expert Panel] of this Schedule and:
 - (A) the amount awarded to a party through that process; or
 - (B) the determination results in a party doing or not doing something that has a value or consequence to that party or to another party that, in the reasonable opinion of the initiating party,

is more than more than \$500,000 in the aggregate;
 - (iii) the determination by the Expert Panel involves issues other than monetary claims by one party against another party that the initiating party reasonably believes are material and significant to the initiating party;
 - (iv) the Expert Panel notifies the parties that it is unable to reach a unanimous decision with respect to the dispute in accordance with Section 3.9(b) of this Schedule; or

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- (v) the parties agree in writing in any other circumstance to refer a dispute to be resolved by arbitration in accordance with this Part 4, including where the parties waive their right to resolve the dispute through reference to an Expert Referee or Expert Panel.
- (b) The Arbitration Dispute Notice shall set out, in addition to the requirements provided for in Section 1.1(b) of this Schedule, as applicable:
 - (i) the determination of the Expert Referee;
 - (ii) the determination of the Expert Panel; or
 - (iii) the notification of the Expert Panel to the parties of the Expert Panel's inability to reach a unanimous decision.

4.2 Initiation of Court Proceedings rather than Arbitration

- (a) If the parties have referred the dispute for resolution through reference to an Expert Referee pursuant to Part 2 [Referral to Expert Referee] of this Schedule and the dispute is not completely resolved by agreement between the parties within 10 Business Days of the receipt of the Expert Referee's decision and:
 - (i) no Arbitration Dispute Notice has been delivered by one party to the other; or
 - (ii) a Notice of Objection to Arbitration has been delivered by one party to the initiating party within five Business Days of receipt of the Arbitration Dispute Notice,then either party may commence proceedings in respect of the dispute in the courts of British Columbia. If a party has commenced such proceedings but has not served the other party as required for such proceedings prior to the other party delivering an Arbitration Dispute Notice, the party commencing such proceedings will either give the Notice of Objection to Arbitrate or serve such party the required notice within five Business Days of receipt of the Arbitration Dispute Notice, failing which the dispute will be resolved by Arbitration pursuant to Section 4.1 of this Schedule.
- (b) If the amount in respect of a specific dispute, as determined by the Expert Panel in accordance with Section 4.1(a)(ii) of this Schedule, is greater than \$2,000,000:
 - (i) an initiating party may, instead of issuing an Arbitration Dispute Notice pursuant to Section 4.1(a) of this Schedule in respect of such dispute, give to the other party written notice that it will initiate a proceeding in a Court to resolve the dispute in accordance with Part 5 of this Schedule; or
 - (ii) a responding party may, within 14 days of receipt of an Arbitration Dispute Notice pursuant to Section 4.1(a) of this Schedule in respect of such dispute, give a Notice of Objection to Arbitration to the initiating party, and may initiate a proceeding in a Court to resolve the dispute in accordance with Part 5 of this Schedule.

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- (c) If a responding party issues a Notice of Objection to Arbitration to an initiating party pursuant to Section 4.2(b)(ii) of this Schedule then, unless within 14 days of receiving notice from the responding party:
- (i) the initiating party gives written confirmation to the responding party that it will initiate Court proceedings to resolve the dispute in accordance with Part 5 of this Schedule;
 - (ii) the initiating party has initiated Court proceedings; or
 - (iii) the responding party has initiated Court proceedings,
- the initiating party shall have no further access to any appeal, arbitration, litigation or other dispute resolution process in respect of such dispute without the express written agreement of the responding party.

4.3 Arbitration Act and BCICAC Rules of Procedure

The parties acknowledge and agree that any dispute referred to arbitration pursuant to this Part 4 is governed by the *Arbitration Act* (British Columbia) and that the Domestic Commercial Arbitration Rules shall apply to any arbitration conducted hereunder except to the extent that its provisions are modified by the express provisions of this Part 4 or by written agreement of the parties.

4.4 Appointment of Arbitrator

- (a) Within 21 days following receipt of an Arbitration Dispute Notice by the responding party under Section 4.1(a) of this Schedule, and subject to the responding party issuing a Notice of Objection to Arbitration pursuant to Section 4.2(b)(ii) of this Schedule, the initiating party and the responding party shall designate a single arbitrator acceptable to both of them.
- (b) If the parties fail to appoint such a single arbitrator within the period of time and in the circumstances set out in Section 4.4(a) of this Schedule, either party may apply to the BCICAC to select the arbitrator, in which case the BCICAC shall appoint the arbitrator at the earliest opportunity in accordance with Article 14 of the Domestic Commercial Arbitration Rules.

4.5 No Conflict for Arbitrator

Unless the Province and the Design-Builder otherwise agree, no person may be nominated or appointed to act as arbitrator pursuant to Section 4.4 [Appointment of Arbitrator] of this Schedule (the “**Arbitrator**”) who, or any of whose partners, shareholders, unitholders or Affiliates:

- (a) is or at any time has been involved or interested in the conduct of:
 - (i) any of the Project Work on behalf of the Design-Builder or any of its Subcontractors; or
 - (ii) the Project on behalf of the Province; or

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- (b) is a present or former Expert Referee or Expert Panel member.

4.6 Qualifications of Arbitrator

The Arbitrator shall have appropriate qualifications by profession or occupation to decide the matter in dispute.

4.7 No Oral Discovery

There shall be no oral discovery unless otherwise ordered by the Arbitrator.

4.8 Meetings and Hearings of Arbitrator

Meetings and hearings of the Arbitrator shall take place in Vancouver, British Columbia or in such other place as the Province and the Design-Builder may agree. Subject to the foregoing, the Arbitrator may at any time fix the date, time and place of meetings and hearings in the arbitration and shall give the Province and the Design-Builder adequate notice thereof. All meetings and hearings shall be in private unless the Province and the Design-Builder otherwise agree, and each party may be represented at any meetings or hearings by legal counsel. Where the Arbitrator directs the parties to provide oral evidence, each party may examine and re-examine its witnesses and cross-examine those of the other party during the conduct of the arbitration.

4.9 Inadmissibility of Prior Decisions

- (a) If a party is entitled to refer a decision of an Expert Referee under Part 2 [Referral to Expert Referee] or an Expert Panel under Part 3 [Referral to Expert Panel] of this Schedule to arbitration pursuant to Section 4.1 [Referral to Arbitration] of this Schedule or otherwise to initiate or pursue any dispute resolution process, appeal or legal proceeding, then, subject to Section 4.9(b) of this Schedule or unless the parties otherwise expressly agree in writing:
- (i) all submissions prepared by a party in connection with any proceedings under Part 2 [Referral to Expert Referee] or Part 3 [Referral to Expert Panel] of this Schedule and all information, documents, notes and records prepared by the Expert Referee or Expert Panel and all decisions and determinations of the Expert Referee or Expert Panel shall be confidential and inadmissible in any arbitration or other such dispute resolution process, appeal or legal proceeding, unless otherwise provided by the terms of this Schedule; and
 - (ii) all submissions prepared by a party in connection with any proceedings involving the Arbitrator and all information, documents, notes and records prepared by the Arbitrator and all decisions and determinations of the Arbitrator shall be confidential and inadmissible in any other such dispute resolution process, appeal or legal proceeding, unless otherwise provided by the terms of this Schedule.
- (b) The restrictions on admissibility set out in Section 4.9(a) of this Schedule shall not apply to any appeal or litigation permitted pursuant to Section 4.11 [Limitation on Appeal of Arbitrator's Decision] of this Schedule or any proceeding permitted under Section 4.2 of this Schedule.

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- (c) For greater certainty, nothing herein shall prevent the tendering of the same oral or written evidence before a proceeding adjudicated by an Expert Panel and a proceeding adjudicated by an Arbitrator or a judge of the Supreme Court of British Columbia, as the case may be, and, despite Section 4.9(a)(i) above, a party will not be precluded from making the same or similar submissions to an Arbitrator or a Judge to those made by that party before an Expert Panel.
- (d) No Expert Referee, Expert Panel member nor any Arbitrator may be required to testify or otherwise be compellable in or in connection with any dispute resolution process, litigation, arbitration, appeal or legal proceeding.

4.10 Decision of Arbitrator

Subject to the provisions of the *Arbitration Act* (British Columbia), the Arbitrator shall send a decision in writing to the Province and the Design-Builder within 45 days following the conclusion of all hearings referred to in Section 4.8 [Meetings and Hearings of Arbitrator] of this Schedule unless such period of time is extended for a fixed period by the Arbitrator on written notice to each party because of illness or other cause beyond the Arbitrator's control and, unless the Province and the Design-Builder otherwise agree, shall state the reasons for the decision.

4.11 Limitation on Appeal of Arbitrator's Decision

Subject to the rights of appeal that either party may have under the provisions of the *Arbitration Act* (British Columbia), the decision of the Arbitrator shall be final and binding on the Province and the Design-Builder.

4.12 Arbitrator's Powers

The object of an arbitration hereunder is to ensure the just, expeditious, economical and final determination of the dispute. Without limiting the jurisdiction or powers of the Arbitrator under the *Arbitration Act* (British Columbia), a submission to arbitration hereunder shall confer on the Arbitrator the jurisdiction and power to:

- (a) determine any question of law arising in the arbitration;
- (b) determine any question as to the Arbitrator's jurisdiction;
- (c) determine any question of good faith or dishonesty arising in the dispute;
- (d) order any party to furnish further details of its case, in fact or in law to another party;
- (e) proceed with the arbitration notwithstanding any failure or refusal of a party to comply with these provisions or with the Arbitrator's orders or directions or to attend any meeting or hearing, but only after giving such party reasonable notice that the Arbitrator intends to do so;
- (f) receive and take into account such written or oral evidence tendered by the parties as the Arbitrator determines is relevant, whether or not strictly admissible in law;
- (g) make one or more interim awards;

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- (h) hold meetings and hearings and make a decision (including without limitation a final decision) in British Columbia or elsewhere with the concurrence of the parties;
- (i) order the parties to produce to the Arbitrator, and to each other for inspection, and to supply copies of, any books and records, documents, materials and other information in their possession or control which the Arbitrator determines to be relevant;
- (j) order the preservation or storage of any property or thing relevant to the subject matter of the arbitration under the control of either of the parties; and
- (k) include, as part of any award, the payment of interest at the Prime Rate from an appropriate date as determined by the Arbitrator.

The jurisdiction and powers referred to in this Section 4.12 shall be exercised at the discretion of the Arbitrator subject only to applicable Laws and the provisions of this Agreement.

4.13 Costs of Arbitration

Notwithstanding Section 9.1 [Indemnification by Design-Builder], Section 9.5 [Indemnification by the Province] and Section 9.6 [Limited Province Indemnity for Contamination], or any other provision of this Agreement, each party shall bear its own costs of the process for resolution of the dispute by arbitration (including all legal fees and expenses). The Province and the Design-Builder shall share equally, and be responsible for their respective share of all costs of the Arbitrator, as and when due.

PART 5 COURT PROCEEDINGS

5.1 Court Proceedings

- (a) The Province or the Design-Builder may initiate a proceeding in a Court to resolve a dispute between the parties in the following circumstances:
 - (i) the circumstances set out in Section 4.2 [Initiation of Court Proceedings rather than Arbitration] of this Schedule; or
 - (ii) such party is appealing a decision of the Arbitrator in accordance with Section 4.11 [Limitation on Appeal of Arbitrator's Decision] of this Schedule.
- (b) Notwithstanding any other provision of this Schedule, no party shall be precluded from initiating a proceeding in a Court for the purpose of obtaining any emergency or provisional remedy to protect its rights that may be necessary and that is not otherwise available under this Agreement, including temporary and preliminary injunctive relief and restraining orders and the appointment of a receiver or receiver and manager or any remedy or relief as expressly contemplated by Sections 14.4(b)(ii) or 15.1(c).

**APPENDIX A
EXPERT REFEREE AGREEMENT**

BETWEEN:

**[NAME AND ADDRESS OF EXPERT REFEREE]
(the “Expert Referee”)**

AND:

**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH
COLUMBIA
(the “Province”)**

AND:

**PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP
(the “Design-Builder”)**

We write to confirm your appointment as an Expert Referee under the Design-Build Agreement (the “**Design-Build Agreement**”) dated December 13, 2019 among the Province, BC Transportation Financing Authority and the Design-Builder. The terms of your appointment are as contained in Part 2 [Referral to Expert Referee] of Schedule 16 to the Design-Build Agreement.

We confirm our agreement for you to review the Dispute(s) described in the Dispute Notice in accordance with the provisions of the Design-Build Agreement, and to perform the functions of an Expert Referee as described in Part 2 [Referral to Expert Referee] of Schedule 16 to the Design-Build Agreement. A copy of the Design-Build Agreement and related materials will be forwarded to you shortly.

We confirm that your daily/hourly rate for fees is \$• [Insert applicable rate]. In addition to your invoiced fees, the Province will pay any and all reasonable disbursements incurred in providing your services.

Please submit your invoices on a monthly basis directly to • [Insert name of Province’s Representative] (the “**Province’s Representative**”). The Province will make payment within 30 calendar days of receipt.

Please confirm your agreement to the terms as set out in this letter by signing a copy of the enclosed letter and returning it to the Province’s Representative.

Yours truly,

Authorized Signatory of the Province

Date

Authorized Signatory of the Design-Builder

Date

Expert Referee

Date

**APPENDIX B
EXPERT PANEL MEMBER AGREEMENT**

BETWEEN:

**[NAME AND ADDRESS OF EXPERT PANEL MEMBER]
(the “Expert Panel Member”)**

AND:

**HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH
COLUMBIA
(the “Province”)**

AND:

**PACIFIC GATEWAY CONSTRUCTORS GENERAL PARTNERSHIP
(the “Design-Builder”)**

We write to confirm your appointment as an Expert Panel member under the Design-Build Agreement (the “**Design-Build Agreement**”) dated December 13, 2019 among the Province, BC Transportation Financing Authority and the Design-Builder. The terms of your appointment are as contained in Part 3 [Referral to Expert Panel] of Schedule 16 to the Design-Build Agreement.

We confirm our agreement for you to review the Dispute(s) described in the Dispute Notice in accordance with the provisions of the Design-Build Agreement, and to perform the functions of an Expert Panel member as described in Part 3 [Referral to Expert Panel] of Schedule 16 to the Design-Build Agreement. A copy of the Design-Build Agreement and related materials will be forwarded to you shortly.

We confirm that your daily/hourly rate for fees is \$• **[Insert applicable rate]**. In addition to your invoiced fees, the Province will pay any and all reasonable disbursements incurred in providing your services.

Please submit your invoices on a monthly basis directly to • **[Insert name of Province’s Representative]** (the “**Province’s Representative**”). The Province will make payment within 30 calendar days of receipt.

Please confirm your agreement to the terms as set out in this letter by signing a copy of the enclosed letter and returning it to the Province’s Representative.

Yours truly,

Authorized Signatory of the Province

Date

Authorized Signatory of the Design-Builder

Date

Expert Panel Member

Date

**SCHEDULE 17
RECORDS AND REPORTS**

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**PART 1
RECORDS**

1.1 Design-Builder Records

The Design-Builder shall produce, maintain and update in accordance with this Agreement and the Records Management Protocol all records (collectively, the “**Records**”) required by this Agreement (including by Good Industry Practice) to be produced, maintained and updated by the Design-Builder, including all records specified or referred to in the Project Requirements or otherwise in connection with the Project, the Project Work, the Project Infrastructure and the Project Site.

1.2 Management of Records

- (a) The requirements set out in this Schedule and the Records Management Protocol include the minimum requirements to be complied with, and are without prejudice to any Laws or Good Industry Practice which require the keeping of specified Records for a longer period or the production and maintenance of additional Records.
- (b) All Records produced and maintained by the Design-Builder in accordance with this Agreement must be accurate, complete, legible, readily identifiable, readily retrievable, reliable, authentic, secure and in English.
- (c) The financial Records produced and maintained by the Design-Builder in accordance with this Agreement must provide sufficient detail to identify all revenue and expenditures in respect of the Project on a gross basis.
- (d) The text of all documents shall be prepared and recorded using software systems agreed to by the Province.
- (e) The Design-Builder shall comply promptly and at its expense with:
 - (i) all Laws relating to information, records and other documentation relating to or acquired, obtained or produced in connection with the Project, the Project Work, the Project Infrastructure or the Project Site or any part thereof; and
 - (ii) all requests or requirements of the Province from time to time for the purpose of enabling the Province or any other Governmental Authority to comply with its obligations under any Laws relating to information, records and other documentation relating to or acquired, obtained or produced in connection with the Project, the Project Work, the Project Infrastructure or the Project Site or any part thereof.
- (f) The Design-Builder, the Province and BCTFA shall cooperate to develop documentation to support each party’s compliance requirements under Laws, including the *Excise Tax Act* (Canada).
- (g) The Design-Builder shall maintain proper, accurate and complete financial accounts and records, including Subcontracts, invoices, statements, receipts and vouchers, and supporting documentation, in respect of the Project and all expenditures related to the Project, and shall permit the Province, the Port Authority, the Federal Government, the Auditor General of Canada and their designated representatives, to the extent permitted by Law, to at all times be permitted to inspect, review, copy and audit any records and

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accounts respecting the Project and to have reasonable and timely access to the Project Site and to any documentation relevant for the purpose of audit.

1.3 Records Management Protocol

PR1.3a

Within 90 days following the Effective Date, the Design-Builder shall submit to the Province's Representative, for acceptance, acting reasonably, in accordance with the Consent Procedure, an initial protocol (the "**Records Management Protocol**") which complies with all requirements set forth in this Agreement (including compliance with Good Industry Practice and Laws) and any other policies, requirements and information schedules approved under the *Information Management Act* (British Columbia) that would from time to time be applicable to the creation, maintenance, management, holding, transfer, retention, preservation and disposal of the Records if they were maintained by the Province, including that:

- (i) the Records Management Protocol must be consistent with and comply with the Design-Builder's Quality Management System and Quality Documentation and Schedule 7 [Quality Management];
- (ii) the Records Management Protocol shall set forth minimum retention periods consistent with Section 1.4 [Retention of Records] of this Schedule and otherwise satisfactory to the Province for each class of Records produced and maintained by the Design-Builder;
- (iii) the Records Management Protocol shall set forth records management practices and procedures sufficient to ensure that the Records are organized, classified and retained in formats that enable the Design-Builder to meet all of its obligations in respect of the management of the Records under this Agreement, including the requirements set out in Section 1.2 [Management of Records] of this Schedule;
- (iv) the Records Management Protocol shall include procedures (consistent with the Project Requirements and in accordance with Good Industry Practice) for backing-up and storage in safe custody of all Records that are generated by or maintained on a computer or in any other machine readable format;
- (v) the Design-Builder shall keep all Records in safekeeping in such a manner as to ensure the integrity of the Records and at a location within British Columbia that is satisfactory to and approved by the Province;
- (vi) any warehouse or other facility used to store Records must meet any storage and security standards established by the Province's Corporate Information and Records Management Office;
- (vii) notwithstanding any other terms of this Agreement, no Records shall be destroyed or otherwise disposed of without the express written consent of the Province or as authorized under an information schedule approved under the *Information Management Act* (British Columbia);
- (viii) any Records authorized for disposition shall be disposed of only in accordance with disposition standards for secure disposal established by the Province, the

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Ministry or by the Province's Corporate Information and Records Management Office;

- (ix) the Design-Builder shall ensure that there is a designated and appropriately qualified person at all times responsible for the management of the Records and for liaison with the Province in connection with all matters relating thereto;
- (x) the Design-Builder shall keep on the Project Site at all times during Construction one copy of all drawings for such Construction;
- (xi) the Design-Builder shall not sell, transfer or relocate any Records to the custody, physical or otherwise, of another jurisdiction, or person other than to the Subcontractors; and
- (xii) the Design-Builder shall not disclose any of the Records or contents thereof except subject to and in accordance with the provisions of this Agreement, including Section 17.1 [Confidentiality].

(b) The Design-Builder shall:

- (i) where necessary; and
- (ii) as otherwise required by the Province from time to time,

submit updates to the Records Management Protocol to the Province's Representative from time to time, for review, acting reasonably, in accordance with the Review Procedure to ensure that the Records Management Protocol continues to meet the requirements of this Part 1 and Good Industry Practice.

PR1.3c The Design-Builder shall comply with, and shall cause the Subcontractors to comply with, the Records Management Protocol, as submitted and updated from time to time in accordance with this Part 1, in connection with all Records maintained or required to be maintained under this Agreement.

1.4 Retention of Records

- (a) Without prejudice to any longer retention periods required under Laws (which shall be complied with by the Design-Builder), all Records shall be retained in accordance with the retention policies of the Province, Good Industry Practice and Laws, and in any event for no less than the following periods:
 - (i) all as-built drawings shall be retained for at least seven years after the Total Completion Date; and
 - (ii) all Records relating to the subject matter of any dispute between the parties must be retained for at least seven years after the resolution of such dispute; and
 - (iii) all Records referred to in Section 1.2(g) of this Schedule shall be retained for at least seven years after the Total Completion Date.

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- (b) Where the required period set out in the Records Management Protocol for the retention of any Records has expired, the Design-Builder shall notify the Province as to what it intends to do with such Records. If the Design-Builder intends then or subsequently to dispose of such Records, the Design-Builder shall so notify the Province and, if the Province elects within 40 days of receipt of notice from the Design-Builder to receive such Records or any part thereof, then the Design-Builder, at its own cost, shall deliver such Records to the Province in the manner and at such location in British Columbia as the Province specifies.

1.5 Procedure on Termination

- (a) As and when required by Section 14.8(a)(vii), the Design-Builder shall, at its own cost, deliver up to the Province, in the manner and at such location in British Columbia as the Province specifies, such Records as are in existence at the Termination Date or, where any such Records are required by Law to remain with the Design-Builder, copies thereof.
- (b) The Province, so long as it retains possession thereof, shall allow the Design-Builder to inspect all Records delivered to the Province pursuant to Section 1.5(a) of this Schedule on reasonable notice.

1.6 Province Access to Records

PR1.6a The Design-Builder shall provide live, internet-based access to all current, up-to-date Records (with the exception only of financial records) to the Province, the Province's Representative and the Province's authorized representatives. The means by which such access is provided shall enable efficient "read-only" access to and retrieval of specific records when performing record searches.

- (b) All Records shall be kept in good order and in such form as to be capable of audit and inspection (including by electronic means to the extent that such Records were delivered by the Province or otherwise are maintained in an electronic format) by the Province. The Design-Builder shall make all Records available at all reasonable times for audit or inspection by or on behalf of the Province, the Province's Representative, BCTFA or any of the Province's authorized representatives.

1.7 Copies

The Province, BCTFA and the Province's Representative and any of their authorized representatives shall be entitled to take copies of the Records or any part thereof at the Design-Builder's cost and for that purpose to use such copying facilities as are maintained at the place where the Records are kept.

PART 2 REPORTS AND INFORMATION

2.1 Required Reports

The Design-Builder shall submit to the Province, in accordance with this Agreement, all reports (collectively, the "**Reports**") provided for or specified in or required under the provisions of this Agreement and the Project Requirements.

2.2 Number and Time

All Reports shall be submitted in such number and by such times as required by this Agreement or the applicable Project Requirements or, where no such number or time is so specified, in such number and by such time as may be reasonably required by the Province.

2.3 Form

- (a) Unless otherwise specified in this Agreement, including the applicable Project Requirements, the Reports shall be in such form as reasonably required by the Province or, where a Report is required to be submitted periodically, in the same form as such Report was previously submitted until otherwise required by the Province.
- (b) At the request of the Province, each Report shall be accompanied by a copy of such Report or any part thereof for electronic storage in such form and compatible with such software as the Province reasonably requires.

2.4 Further Information

The Design-Builder shall at any time and from time to time at its own cost provide the Province with such further or other information with respect to the Project, the Project Work, the Project Infrastructure and the Project Site as the Province may reasonably require.

2.5 Objections to Reports

- (a) If the Province considers that any Report either has not been compiled in accordance with the provisions of this Agreement or has been based on erroneous information or data, then the Province may serve a notice objecting to such Report on the Design-Builder within 30 days of receipt of such Report.
- (b) If any objection under Section 2.5(a) of this Schedule has not been resolved by agreement between the Province and the Design-Builder within 14 days after the service of such notice, then either of the Province or the Design-Builder may refer the matter to the Dispute Resolution Procedure for determination.

2.6 Revisions to Reports

If the resolution (whether by agreement or determination under the Dispute Resolution Procedure) of any objection made by the Province pursuant to Section 2.5(a) of this Schedule requires any revision or adjustment to any Report, then the Design-Builder shall as soon as practicable issue revised versions of each affected Report and such revised Report shall for all purposes of this Agreement take the place of the original Report.

**SCHEDULE 18
INTERFACE REQUIREMENTS**

PART 1 INTERFACE REQUIREMENTS 1

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- 1.2 Interface Requirements 1
- 1.3 Review of SFPR Concession Agreement 1
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PART 2 INTERFACE COMMITTEE 2

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**PART 1
INTERFACE REQUIREMENTS**

1.1 Definitions

In this Schedule:

- (a) “**Interface Committee**” has the meaning given in Section 2.1 of this Schedule;
- (b) “**SFPR Concessionaire Parties**” means any subcontractors and their respective representatives involved in the SFPR Project and, as applicable in the context, their respective directors, officers and employees, and any other person for whom they are respectively responsible under the SFPR Concession Agreement or under Law;
- (c) “**SFPR Permits**” means the “Permits”, as defined in the SFPR Concession Agreement, which have been provided by the Province to the Design-Builder and identified as the “SFPR Permits” for the purposes of this Schedule; and
- (d) “**SFPR Project**” has the meaning given to “Project” in the SFPR Concession Agreement.

1.2 Interface Requirements

The Design-Builder shall at its expense comply with, observe, satisfy and perform all of the obligations and requirements of the Design-Builder set out in this Schedule (the “**Interface Requirements**”).

1.3 Review of SFPR Concession Agreement

The Design-Builder acknowledges and agrees that it has reviewed and understands the terms and conditions of the SFPR Concession Agreement and the obligations of the SFPR Concessionaire thereunder as it relates to the Project Site and any possible overlap of responsibilities with the Design-Builder under this Agreement.

1.4 Cooperation

The Design-Builder will, and will cause any Subcontractor and any other person for whom the Design-Builder is responsible in law to, cooperate with the SFPR Concessionaire and the SFPR Concessionaire Parties in a commercially reasonable manner in the performance of the Design-Builder’s obligations under this Agreement, with such cooperation to include:

- (a) cooperation and coordination in obtaining and maintaining any SFPR Permits required, directly or indirectly, by the SFPR Concessionaire relating to the SFPR Concessionaire’s obligations under the SFPR Concession Agreement;
- (b) providing such access to the SFPR Concessionaire and any SFPR Concessionaire Party to the Project Site as may be reasonably necessary for the SFPR Concessionaire to fully perform its obligations under the SFPR Concession Agreement, subject to and in accordance with the health and safety procedures established by the Design-Builder pursuant to Section 4.13 [Health and Safety Program] and Section 4.14 [Design-Builder’s Occupational Health and Safety Obligations] for the time being in force in relation to the

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relevant parts of the Project Site, and which health and safety procedures will be provided to the SFPR Concessionaire;

- (c) providing such information and reports as may be reasonably required by the SFPR Concessionaire to satisfy any of its reporting obligations, from time to time, under the SFPR Concession Agreement; and
- (d) providing such other information or access that may be requested by the Province at the reasonable request of the SFPR Concessionaire in connection with the SFPR Concessionaire's obligations under the SFPR Concession Agreement.

1.5 No Interference or Obstruction

The Design-Builder will not knowingly:

- (a) materially interfere with, obstruct, impede or delay the SFPR Concessionaire or any SFPR Concessionaire Party in the performance of the SFPR Concessionaire's obligations under the SFPR Concession Agreement; or
- (b) permit any act or omission on either its part or the part of any Subcontractor or any other person for which it is in law responsible which will, or would reasonably be expected to, contribute to, cause or constitute a breach by the SFPR Concessionaire of the SFPR Concession Agreement or any applicable SFPR Permits, or lead to any diminution or loss of any of the SFPR Concessionaire's rights or entitlements under the SFPR Concession Agreement.

1.6 Changes to Project Schedule

The Design-Builder will keep the Interface Committee informed of all material changes to the Project Schedule, including changes to the Substantial Completion Target Date.

PART 2 INTERFACE COMMITTEE

2.1 Goals of Interface Committee

The Province, the Design-Builder and the SFPR Concessionaire shall establish and maintain, until the Total Completion Date, a committee (the "**Interface Committee**") with the goals of:

- (a) minimizing interference and disruption with the Design-Builder's and the SFPR Concessionaire's respective obligations under this Agreement and the SFPR Concession Agreement; and
- (b) informally addressing any possible disputes arising among the Province, the Design-Builder and the SFPR Concessionaire from time to time.

2.2 Establishment of Interface Committee

The Interface Committee shall be established as follows:

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- (a) The Interface Committee shall be established by the Province, the Design-Builder and the SFPR Concessionaire within 30 days of the execution of this Agreement.
- (b) The Interface Committee shall be comprised of three individuals, being one representative (each, a “**Representative**”) from each of the Province, the Design-Builder and the SFPR Concessionaire, and each of which shall appoint a primary Representative and an alternate Representative to serve on the Interface Committee when the primary representative is unavailable for any reason.
- (c) Both the primary and the alternate Representative of each of the Province, the Design-Builder and the SFPR Concessionaire may, but shall not be required to, attend any meeting of the Interface Committee, provided that, for the purposes of quorum and any actions or decisions to be taken at such meeting, if both the primary and the alternate Representative attend a particular meeting only the primary Representative shall be deemed to be present.
- (d) The Representatives shall select a chairman (the “**Chairman**”) from among themselves from time to time, who shall have the duties and obligations as may be specified by the Interface Committee.
- (e) One Representative of each of the Province, the Design-Builder and the SFPR Concessionaire shall make reasonable efforts to attend all meetings of the Interface Committee. If any Representative is routinely absent, he or she will be replaced by the applicable party that appointed such Representatives upon the request of the other Representatives.
- (f) The Interface Committee will meet monthly in person or by telephone conference to discuss the progress of the Project Work and any other matters raised by any of the Province, the Design-Builder or the SFPR Concessionaire
- (g) Additional meetings of the Interface Committee may be held at the request of any Representative, provided that at least two Business Days’ prior notice in writing of such meeting shall be given to each other Representative unless the requirement for such notice is expressly waived in writing by such other Representatives or such other Representatives attend the meeting and do not object to the absence of such required notice. Unless otherwise agreed to by the Representatives, each such notice shall be accompanied by a written agenda setting out in reasonable detail the matters to be discussed at the meeting together with any relevant supporting materials.
- (h) Except as otherwise provided for in the Agreement, the Interface Committee shall have the authority, by consensus approval of all Representative, to establish its own reasonable procedures for meetings, notices, minutes and all other matters necessary for efficient operation of the Interface Committee.
- (i) Minutes shall be kept of all meetings of the Interface Committee by the Design-Builder, which shall be approved by the Chairman and circulated to all Representatives within five Business Days of each meeting.
- (j) A quorum for a meeting of the Interface Committee shall be three Representatives, including one Representative of each of the Province, the Design-Builder and the SFPR

HIGHWAY 91/17 UPGRADE PROJECT
DESIGN-BUILD AGREEMENT
SCHEDULE 18: INTERFACE REQUIREMENTS

Commercial in Confidence
Execution

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Concessionaire. If a meeting is called and a quorum is not present, the meeting shall be adjourned for not less than 24 hours.

**SCHEDULE 19
CLOSING DELIVERIES**

In this Schedule, “certified” means that the relevant document is certified (for and on behalf of the relevant corporation or other entity and without personal liability) by an officer, director or authorized signatory of the relevant corporation or other entity as a true, complete and correct copy in full force and effect and unamended as of the date of the relevant certificate.

PART 1 DOCUMENTS TO BE DELIVERED BY THE DESIGN-BUILDER

The Design-Builder shall deliver each of the following documents in accordance with Section 2.17 and in such form and substance as shall be satisfactory to the Province:

- (a) an original of this Agreement executed by the Design-Builder;
- (b) the original Bonds;
- (c) a copy of the Material Subcontract with the Designer;
- (d) insurance binders, including the terms of the relevant policies, for the Required Insurance required to be taken out by the Design-Builder with effect from the Effective Date;
- (e) an original certificate of an officer of each Partner or, for each Partner that is a limited partnership, the general partner of such Partner, in each case certifying true copies of the following:
 - (i) all constating documents of the Design-Builder, such Partner, and, if applicable, its general partner;
 - (ii) for any Partner executing any Project Document, the incumbency of the officers of such Partner or, if applicable, its general partner; and
 - (iii) all corporate and partnership resolutions required to authorize the execution and delivery of all Project Documents to which the Design-Builder and such Partner and, if applicable, its general partner is a party;
- (f) an original British Columbia certificate of good standing or equivalent of the Design-Builder, each Partner, and the general partner of each Partner that is a limited partnership and, for any such entity not formed in British Columbia, a certificate of good standing or equivalent of such entity from its jurisdiction of formation;
- (g) one or more original opinions, addressed to the Province, of counsel to the Design-Builder and/or the Partners as to the formation of the Design-Builder, due authorization, execution and delivery on behalf of the Design-Builder and each Partner of all Project Documents to which the Design-Builder is a party, and the enforceability against the Design-Builder and each Partner of the terms of all Project Documents to which the Design-Builder is a party;
- (h) such other documents as the parties may agree, each acting reasonably.

PART 2 DOCUMENTS TO BE DELIVERED BY THE PROVINCE AND BCTFA

The Province and BCTFA shall deliver the following documents in accordance with Section 2.17 and in such form and substance as shall be satisfactory to the Design-Builder:

- (a) an original of this Agreement, executed by the Province and BCTFA;
- (b) an original certificate of fact of the Deputy Minister of Transportation and Infrastructure under the *Financial Administration Act* (British Columbia), including certification of the following:
 - (i) Guarantees and Indemnities Regulation letter(s) from the Ministry of Finance regarding the indemnities provided by each of the Province and BCTFA under the Province Project Documents;
 - (ii) a certificate of the Ministry of Transportation and Infrastructure pursuant to section 4 of the *Transportation Act* (British Columbia); and
 - (iii) an Order in Council under the *Transportation Act* (British Columbia) authorizing BCTFA to enter into the Design-Build Agreement;
- (c) an original certificate of an officer of BCTFA certifying a true copy of a resolution of the directors of BCTFA authorizing the execution and delivery by BCTFA of this Agreement;
- (d) a notice appointing the Province' Representative pursuant to Section 1.1(a) of Schedule 2 [Representatives, Review Procedure and Consent Procedure]; and
- (e) such other documents as the parties may agree, each acting reasonably.

**SCHEDULE 20
WAIVER OF MORAL RIGHTS**

For good and valuable consideration (the receipt and sufficiency of which are hereby acknowledged) I, _____ do agree and hereby irrevocably waive in favour of HER MAJESTY THE QUEEN IN RIGHT OF THE PROVINCE OF BRITISH COLUMBIA (the “**Province**”), her servants, agents and employees, all of my moral rights (including but not limited to those established under the *Copyright Act* (Canada) as amended from time to time) *droits moraux*, and all similar rights arising pursuant to the laws of any country or at common law in any of the Project Intellectual Property including but not limited to the right to prevent distortion, mutilation or modification of the Project Intellectual Property, the right to prevent the Project Intellectual Property, any Modifications to Province Provided Materials or the Records from being used in association with a product, service cause or institution, and the right to have my name associated with the Project Intellectual Property, any Modifications to Province Provided Materials or the Records, and I will not make any claim against the Province, BC Transportation Financing Authority (“**BCTFA**”) or their respective servants, agents, employees or licensees with respect to these rights.

I further acknowledge and agree that the Province and BCTFA may license or assign the Project Intellectual Property, any Modifications to Province Provided Materials or the Records to third parties and agree that the preceding sentence will extend to all such parties, and their assignees and licensees.

Capitalized terms used and not defined herein shall have the meaning given to such terms in the Design-Build Agreement made as of December 13, 2019 among Pacific Gateway Constructors General Partnership, the Province and BCTFA.

EXECUTED at _____, this _____ day of _____, _____

SIGNED AND DELIVERED BY

in the presence of:

(Witness)

Name:

**SCHEDULE 21
COMMUNITY BENEFITS REQUIREMENTS**

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PART 1
COMMUNITY BENEFITS REQUIREMENTS

1.1 Community Benefits Requirements

The Design-Builder shall at its expense comply with, observe, satisfy and perform all of the obligations and requirements set out in this Schedule (the “**Community Benefits Requirements**”).

1.2 Definitions

For the purposes of this Schedule:

- (a) “**AEST**” means Her Majesty the Queen in right of the Province of British Columbia, as represented by the Minister of Advanced Education, Skills & Training, being the current minister with responsibility for the Apprenticeship Policy and Procedures Guidelines, or any future minister with responsibility for apprenticeship in British Columbia;
- (b) “**Applicable Contracts**” means this Agreement, and all Subcontracts constituting Contracts for Specified Trades and, notwithstanding Section 2.1 of the Apprenticeship Policy and Procedures Guidelines, regardless of the value of such Subcontracts;
- (c) “**Apprenticeship Authority**” means a government-recognized organization that is responsible for managing and overseeing a jurisdiction’s industry training or apprenticeship system, which generally includes the registration of apprentices and employers/sponsors;
- (d) “**Apprenticeship Policy and Procedures Guidelines**” means the Province’s “Apprentices on Public Projects in British Columbia: Policy and Procedures Guidelines” dated July, 2015 and updated March, 2016;
- (e) “**Apprenticeship Target Ratio**” has the meaning given in Section 2.2(b) of this Schedule;
- (f) “**Contracts for Specified Trades**” means any and all contracts to perform the Project Work where the Primary Scope of Work of such contract is in one of the Specified Trades;
- (g) “**Equity Group**” is an inclusive term referring to women in non-traditional work, people with disabilities, youth (ages 16-24) and other groups traditionally underrepresented in the construction workforce;
- (h) “**Form A**” means the form entitled “Form A: Confirmation of Intent to Use Registered Apprentices” attached as Attachment 1 to the Apprenticeship Policy and Procedures Guidelines;
- (i) “**Form B**” means the form entitled “Form B: Apprentice Utilization Report” attached as Attachment 2 to the Apprenticeship Policy and Procedures Guidelines;
- (j) “**Indigenous**” is an inclusive term referring to all First Nations, Metis and Inuit peoples;
- (k) “**Local Residents**” means a person who resides within British Columbia and:

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- (i) within a 100 kilometer radius of the Project Site for a period of six months prior to the commencement of Construction at the Project Site; or
 - (ii) had a residence in a local community within a 100-kilometer radius of the Project Site for one year prior to the date of hire after the commencement of Construction; and
- (l) **“Primary Scope of Work”** means the main purpose of the contract;
 - (m) **“Red Seal Trade”** means a trade recognized as a “Red Seal Trade” by the Industry Training Authority of British Columbia;
 - (n) **“Registered Apprentice”** means an apprentice who is registered with an Apprenticeship Authority in his/her home jurisdiction and has a valid “Trades Worker Identification” number;
 - (o) **“Specified Trade”** means one of the trades listed in Attachment 3 to the Apprenticeship Policy and Procedures Guidelines; and
 - (p) **“Trainee”** means an individual working in a trades-related or technical (non-administrative) occupation and receiving on-the-job training, who is not registered with an Apprenticeship Authority as an apprentice.

1.3 Community Benefits Objectives

The purpose and objectives of the Community Benefits Requirements are

- (a) increased apprenticeship and skills training opportunities;
- (b) increased opportunities for Indigenous peoples;
- (c) increased opportunities for members of Equity Groups; and
- (d) increased access for local workers and businesses.

1.4 Achievement of Community Benefits Objectives

- (a) In addition to the Design-Builder’s obligation to provide apprenticeships and skills training in accordance with Part 2 of this Schedule, the Design-Builder shall be responsible for developing and implementing employment and contracting opportunities for Indigenous peoples, Equity Groups and Local Residents, including the establishment of supply and/or service opportunities.
- (b) The Design-Builder shall work with Indigenous peoples, Equity Groups and Local Residents and make commercially reasonable efforts to provide employment and contracting opportunities to Indigenous peoples, Equity Groups and Local Residents that could be awarded by the Design-Builder or its Subcontractors in support of the Project Work.

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- (c) Where applicable, these employment and contracting opportunities made available by the Design-Builder will also be included in the calculation of the employment and contracting opportunities made available by the Design-Builder to Identified Indigenous Groups for the purposes of Schedule 22 [Indigenous Requirements].

1.5 Community Benefits Plan

- (a) The Design-Builder shall develop, implement and update a community benefits plan (the “**Community Benefits Plan**”) meeting the requirements of this Section 1.5 and this Agreement.

PCB1.5b The Community Benefits Plan shall be submitted to the Province’s Representative no later than 60 days from the Effective Date, in accordance with the Consent Procedure.

- (c) The Community Benefits Plan shall contain, at a minimum:
 - (i) the appointment of a Design-Builder representative to be responsible for:
 - (A) administering the Community Benefits Plan,
 - (B) submitting information to the Province in accordance with Section 1.5(c)(iv) of this Schedule detailing how the Design-Builder is meeting its obligations under the Community Benefits Plan and this Schedule; and
 - (C) liaising with the Province’s Representative on all matters relating to the Community Benefits Plan for the duration of the Project;
 - (ii) a process, strategy and schedule for developing and implementing employment and contracting opportunities for Indigenous peoples, Equity Groups and Local Residents as required to meet the objectives of the Community Benefits Requirements;
 - (iii) a process for updating, revising and/or re-submitting the Community Benefits Plan to the Province’s Representative, if required;
 - (iv) the format of a quarterly report to be submitted to the Province’s Representative, to be developed in collaboration with the Province and reporting on the following items:
 - (A) employment and contracting opportunities made available for Indigenous peoples, Equity Groups and Local Residents, both on an aggregate basis and reported separately for Indigenous peoples, Local Residents and Equity Groups and further, for Equity Groups, reported out into the categories of women, people with disabilities, youth and other;
 - (B) realized employment opportunities for Indigenous peoples, Equity Groups and Local Residents, both on an aggregate basis and reported separately for Indigenous peoples, Local Residents and Equity Groups, compared to those identified in the Community Benefits Plan and

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further, for Equity Groups, reported out into the categories of women, people with disabilities, youth and other;

- (C) explanations for any variances referenced in paragraph (B) above; and
- (D) any remedial actions or adjustments to the Community Benefits Plan that may be necessary; and
- (v) the format of a final report to be submitted to the Province's Representative prior to Total Completion, to be developed in collaboration with the Province and which summarizes the employment and contracting opportunities made available throughout the Project for Indigenous peoples, Equity Groups and Local Residents, the status of the realization of such opportunities, and a comparison to the accepted Community Benefits Plan.

PART 2 PROJECT APPRENTICESHIP AND SKILLS TRAINING

2.1 Use of Registered Apprentices

The Design-Builder shall:

- (a) use, and ensure that the applicable Subcontractors use, Registered Apprentices in respect of all Applicable Contracts; and
- (b) ensure that any such Registered Apprentices are used directly in the Project Work and over the course of the Applicable Contracts.

2.2 Project Apprenticeship Target Ratio

- (a) To help to increase the number of Registered Apprentices working on capital infrastructure projects in British Columbia, an Apprenticeship Target Ratio has been implemented for the Project.
- (b) The Design-Builder shall provide training and employment apprenticeships during Construction to a target rate of apprenticeship hours to journey person hours of 18% for all Red Seal Trades (the "**Apprenticeship Target Ratio**").

2.3 Other Project Apprenticeship and Skills Training Obligations

- (a) The Design-Builder shall provide employment opportunities during the Construction period for apprentices after the completion of each apprentice's formal training.
- (b) Where applicable, the employment component of such apprenticeship and skills training opportunities made available by the Design-Builder will also be included in the calculation of the employment opportunities made available by the Design-Builder:
 - (i) to Indigenous peoples, Equity Groups and Local Residents for the purposes of Section 1.4 [Achievement of Community Benefits Requirements] of this Schedule; and

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- (ii) to Identified Indigenous Groups for the purposes of Schedule 22 [Indigenous Requirements].

2.4 Project Apprenticeship and Skills Training Plan

- (a) The Design-Builder shall develop, implement and update an apprenticeship and skills training plan (the “**Apprenticeship and Skills Training Plan**”) meeting the requirements of this Section 2.4 and this Agreement.

PCB2.4b

The Apprenticeship and Skills Training Plan shall be submitted to the Province’s Representative no later than 60 days from the Effective Date, in accordance with the Consent Procedure.

- (c) The Apprenticeship and Skills Training Plan shall contain, at a minimum:
 - (i) the appointment of a Design-Builder representative to be responsible for:
 - (A) administering the Apprenticeship and Skills Training Plan,
 - (B) submitting information to the Province in accordance with Section 2.4(c)(vii) of this Schedule detailing how the Design-Builder is meeting its apprenticeship and skills training obligations; and
 - (C) liaising with the Province’s Representative on all matters relating to the Apprenticeship and Skills Training Plan for the duration of the Project;
 - (ii) a schedule of planned apprenticeship and skills training opportunities for Red Seal Trades for the duration of the Project available through the Design-Builder and Subcontractors;
 - (iii) additional apprenticeship and skills training opportunities for labourers and construction specific trades other than Red Seal Trades, that are listed in the Industry Training Authority of British Columbia website available at <https://www.itabc.ca/discover-apprenticeship-programs/search-programs> and as updated from time to time thereafter, that may be made available through the Design-Builder and Subcontractors for the Project;
 - (iv) confirmation that claimed resources are qualified resources in accordance with this Schedule;
 - (v) a process for recruiting qualified resources initially and for the duration of the Project;
 - (vi) a process for updating, revising and/or re-submitting the Apprenticeship and Skills Training Plan to the Province’s Representative, if required;
 - (vii) a format of a quarterly report to be submitted to the Province’s Representative reporting on the following items:
 - (A) apprenticeship and skills training opportunities made available,

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- (B) realized opportunities compared to those identified in the Apprenticeship and Skills Training Plan,
 - (C) explanations for any variances referenced in paragraph (B) above,
 - (D) the implemented and fully completed Red Seal Trade apprenticeship and skills training opportunities and number or apprenticeship hours achieved to date towards the total number of apprenticeship hours required to achieve the Apprenticeship Target Ratio, including the status of the attainment of the schedule set out in paragraph (ii) above, both on an aggregate basis and reported separately for Indigenous peoples, Local Residents and Equity Groups and further, for Equity Groups, reported out into the categories of women, people with disabilities, youth and other;
 - (E) the implemented and fully completed additional apprenticeship and skills training opportunities for trades other than Red Seal Trades, both on an aggregate basis and reported separately for Indigenous peoples, Local Residents and Equity Groups and further, for Equity Groups, reported out into the categories of women, people with disabilities, youth and other; and
 - (F) any proposed remedial actions or adjustments to the Apprenticeship and Skills Training Plan that may be necessary, including the proposed remedial actions or adjustments to be considered pursuant to Section 2.5 of this Schedule in the event that any of the planned opportunities set out in paragraph (ii) above have not been achieved;
- (viii) the schedule for submitting the Form A and Form B in accordance with Section 3.3 of this Schedule;
 - (ix) a commitment to provide information about available apprenticeship and skills training opportunities to Indigenous peoples, Local Residents and Equity Groups, including those which may be available through any Subcontractors; and
 - (x) the format of a final report to be submitted to the Province's Representative prior to Total Completion which summarizes the opportunities made available throughout the Project, the status of such opportunities, and a comparison to the accepted Apprenticeship and Skills Training Plan.

2.5 Failure to Meet the Project Apprenticeship Target Ratio

In the event that the Design-Builder fails to meet the Apprenticeship Target Ratio, the Design-Builder and the Province shall, without prejudice to any other right or remedy available to the Province and BCTFA, including the assignment of NCE Points and/or Default Points pursuant to Schedule 10 [Payment and Performance Mechanism], meet to determine an appropriate remedial strategy to address such failure.

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**PART 3
COMMUNITY BENEFITS REPORTING**

3.1 Community Benefits Plan Reporting

The Design-Builder shall submit to the Province's Representative in accordance with the Review Procedure:

PCB3.1a on a quarterly basis from the Effective Date until the Total Completion Date, the quarterly report required in accordance with the Community Benefits Plan; and

PCB3.1b on or before the Total Completion Date, the final report required in accordance with the Community Benefits Plan,

and provide to the Province such other documentation and information in respect of the Community Benefits Plan as the Province may reasonably request.

3.2 Project Apprenticeship and Skills Training Plan Reporting

The Design-Builder shall submit to the Province's Representative in accordance with the Review Procedure:

PCB3.2a on a quarterly basis from the Effective Date until the Total Completion Date, the quarterly report required in accordance with the Apprenticeship and Skills Training Plan; and

PCB3.2b on or before the Total Completion Date, the final report required in accordance with the Apprenticeship and Skills Training Plan,

and provide to the Province such other documentation and information in respect of the Apprenticeship and Skills Training Plan as the Province may reasonably request.

3.3 Provincial Apprenticeship Policy and Procedures Guidelines Reporting

(a) In addition to the requirements set out in Section 3.2 of this Schedule, and in accordance with the Provincial Apprenticeship Policy and Procedures Guidelines, the Design-Builder:

- (i) shall submit a completed Form A to AEST, with a copy to the Province's Representative, as soon as practicable after the Effective Date and no later than 5 days before the Project Work is scheduled to start and, unless the Province otherwise consents in writing, none of the Design-Builder or any of the applicable Subcontractors may begin work on any Applicable Contract until AEST has confirmed its receipt of such initial Form A;
- (ii) shall submit a completed supplemental Form A to AEST, with a copy to the Province's Representative, before any additional applicable Subcontractors not referenced in the initial Form A commence any Project Work pursuant to an Applicable Contract;

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- (iii) shall submit a completed Form B to AEST, with a copy to the Province's Representative, to report on the utilization of Registered Apprentices by it and all applicable Subcontractors under all Applicable Contracts as follows:
 - (A) within five Business Days after the end of each quarter (March 31, June 30, September 30 and December 31); and
 - (B) within 30 days of the Total Completion Date, or the Termination Date if earlier; and
- (iv) may submit a completed Form B to AEST, with a copy to the Province's Representative, at the same times to report on the utilization of Trainees in relation to the Project, regardless of whether such Trainees are used under Contracts for Specified Trades or other Project-related contracts not in a Specified Trade.

Unless otherwise agreed by AEST, the Design-Builder shall submit Form A and Form B to AEST by email at publicprojects@gov.bc.ca.

- (b) The Province:
 - (i) may, in its sole discretion, delay the start of any Project Work (or require that the Design-Builder order a similar delay by the applicable Subcontractors) until the Province has confirmed (including through the verification process described in Section 3.3(e) of this Schedule) that the Design-Builder is or will be compliant with Section 2.1(a) of this Schedule and that Registered Apprentices will be used on the Project;
 - (ii) shall not issue final payment to the Design-Builder under this Agreement until AEST has confirmed its receipt of the final Form B described in Section 3.3(a)(iii)(B) of this Schedule; and
 - (iii) may, in its sole discretion, delay issue of final payment to the Design-Builder until the Province has confirmed, including through the verification process described in Section 3.3(e) of this Schedule, that the Design-Builder has complied with Sections 2.1(a) and 2.1(b) of this Schedule.
- (c) The Province or AEST may request further information from the Design-Builder and/or the Subcontractors listed on any Form A or Form B to verify the data provided thereon and to ensure compliance with the Apprenticeship Policy and Procedures Guidelines. The Design-Builder shall comply, and ensure that the applicable Subcontractors comply, with any such requests, including by providing to the Province or AEST, if requested, information confirming that Registered Apprentice(s) will be used on the Project.
- (d) If, as a result of a request described in Section 3.3(e) of this Schedule, the Design-Builder is required to provide Personal Information about a Registered Apprentice to the Province or AEST, the Design-Builder shall obtain, or shall ensure that the applicable Subcontractors obtain, as the case may be, written authorization in a form acceptable to the Province from the applicable Registered Apprentice to provide such information to

SCHEDULE 21: COMMUNITY BENEFITS REQUIREMENTS

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the Province or AEST, and the Design-Builder shall not provide to the Province or AEST any Personal Information in respect of which such authorization has not been obtained.

- (e) All data and information collected through Form A and Form B and otherwise in accordance with this Section 3.3 will be housed at AEST and subject to FOIPPA and, notwithstanding Section 15.1 of the Agreement, the Province and AEST may use any aggregate data collected from Form A and Form B and otherwise in accordance with this Section 3.3 for the purposes of evaluating the Apprenticeship Policy and Procedures Guidelines and for public communications regarding apprenticeship training in British Columbia.

**SCHEDULE 22
INDIGENOUS REQUIREMENTS**

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PART 1
INDIGENOUS REQUIREMENTS

1.1 General Requirements

The Design-Builder shall at its expense comply with, observe, satisfy and perform all of the obligations and requirements set out in this Part 1 (the “**Indigenous Requirements**”), including the following:

- (a) The Design-Builder shall provide to the Identified Indigenous Groups during each Contract Year from the Effective Date to the Substantial Completion Date a total of Person Years of employment (the “**Minimum Indigenous Employment Requirement**”), provided that, for each of the first and last such Contract Years, the Minimum Indigenous Employment Requirement shall be pro-rated based on the number of days within such Contract Year. Lists of individuals associated with the Identified Indigenous Groups will be provided to the Design-Builder and updated from time to time, and employment provided to any individual listed on any such list at the time of employment will count towards the Minimum Indigenous Employment Requirement.
- (b) The Design-Builder shall provide to the Identified Indigenous Groups during the period from the Effective Date to the Substantial Completion Date in relation to the Project Work, a total value of contracts of (the “**Minimum Indigenous Contracts Requirement**”). Lists of businesses associated with the Identified Indigenous Groups will be provided to the Design-Builder and updated from time to time, and contracts entered into with any business listed on any such list at the time of entering into such contract will count towards the Minimum Indigenous Contracts Requirement. The Design-Builder shall use all reasonable efforts to provide contracting opportunities on an equitable basis to each Identified Indigenous Group for which businesses have been so identified, provided that, in the event that the Design-Builder, notwithstanding using all such reasonable efforts, is unable to achieve such an equitable allocation of realized contracting opportunities, the Design-Builder may enter into contracts with businesses associated with any Identified Indigenous Group in its discretion.
- (c) The Design-Builder shall have an initial meeting with each of the Identified Indigenous Groups within 30 days of the Effective Date to initiate the process for the determination of the employment and contract opportunities to be established with the respective Identified Indigenous Groups in relation to the Project Work to fulfil the requirements set out in Sections 1.1(a) and 1.1(b) of this Schedule.
- (d) To inform the development of the Indigenous Participation Plan in accordance with Section 1.2 [Indigenous Participation Plan] of this Schedule, the Design-Builder shall meet monthly, at minimum, with the Identified Indigenous Groups until the Indigenous Participation Plan has been developed and accepted in accordance with Section 1.2 [Indigenous Participation Plan] of this Schedule.
- (e) The Design-Builder (including its relevant Subcontractors) shall attend and participate in any business-to-business or other workshops initiated by the Province in relation to the Indigenous Requirements.
- (f) The Design-Builder (including its relevant Subcontractors) shall engage with the Identified Indigenous Groups in a respectful manner that upholds the relationship between the Province and the Identified Indigenous Groups.

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- (g) In addition to the requirements set out in Sections 1.1(a) and 1.1(b) of this Schedule, the Design-Builder shall work with the Identified Indigenous Groups to explore additional employment and contract opportunities that could be awarded by the Design-Builder or its Subcontractors to the respective Identified Indigenous Groups in support of the Project Work. The Design-Builder shall make commercially reasonable efforts to reach mutual agreement with the respective Identified Indigenous Groups for the provision of any such additional employment and contract opportunities in support of the Project Work, and details of all such efforts shall be included in each monthly report submitted to the Province's Representative pursuant to Section 1.6(a) of this Schedule.

1.2 Indigenous Participation Plan

PIR1.2a The Design-Builder shall develop and submit to the Province's Representative for approval, acting reasonably, pursuant to the Consent Procedure within 90 days of the Effective Date, a written plan (the "**Indigenous Participation Plan**") which describes the procedures for achieving the Indigenous Requirements specified in Section 1.1 [General Requirements] of this Schedule.

PIR1.2b The Design-Builder shall update the Indigenous Participation Plan as required and annually, at a minimum, and submit all proposed amendments or updates to the Indigenous Participation Plan to the Province's Representative pursuant to the Consent Procedure.

- (c) The Indigenous Participation Plan shall describe, as a minimum:
- (i) how the Design-Builder has engaged Identified Indigenous Groups in relation to the development of the Indigenous Participation Plan, including how input has been considered in its development;
 - (ii) the identification of the capacities for the types of employment of, and contracts with, each Identified Indigenous Group;
 - (iii) the identification of priority areas for types of employment and contract opportunities for each Identified Indigenous Group, based on the priority areas identified by each Identified Indigenous Group;
 - (iv) the identification of potential applicable contract opportunities for each Identified Indigenous Group;
 - (v) how the Design-Builder intends to comply with its obligations under Sections 1.1(a), 1.1(b) and 1.1(g) of this Schedule, and work with the Identified Indigenous Groups to ensure successful implementation (including describing appropriate procedural mechanisms for developing and maintaining the ongoing working relationship between the Design-Builder and the respective Identified Indigenous Groups);
 - (vi) communications protocols, including frequency of meetings and frequency of updates and communications with Identified Indigenous Groups and identification of key contacts for each Identified Indigenous Group and the Design-Builder's team, which the Design-Builder has agreed with the Identified

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Indigenous Groups at the meetings referred to in Sections 1.1(c) and 1.1(d) of this Schedule;

- (vii) the specific decision-making and procurement processes and how they will be applied to achieve success related to
 - (A) recruitment and hiring of employees to meet the Minimum Indigenous Employment Requirement pursuant to Section 1.1(a) of this Schedule; and
 - (B) entering into contracts to meet the Minimum Indigenous Contracts Requirement pursuant to Section 1.1(b) of this Schedule;
- (viii) a milestone schedule by Contract Year for the attainment of the Minimum Indigenous Contracts Requirement;
- (ix) the process by which additional employment and contract opportunities as contemplated in Section 1.1(g) of this Schedule will be identified and awarded, including how this process has been communicated to the Identified Indigenous Groups and clearly distinguishing between the process in relation to the achievement of the minimum requirements described in Sections 1.1(a) and 1.1(b) of this Schedule and the additional employment and contract opportunities described in Section 1.1(g) of this Schedule;
- (x) how the Design-Builder will liaise and meet regularly, bi-annually at a minimum, with the Identified Indigenous Groups to identify changes to the priorities and capacities for types of employment and contract opportunities for each Identified Indigenous Group, based on the areas identified by each Identified Indigenous Group;
- (xi) training opportunities for the Identified Indigenous Groups, with reference to the priority areas identified for each Identified Indigenous Group in accordance with Section 1.2(c)(iii) of this Schedule, and timeframes within which training will be provided;
- (xii) a format of a monthly report to be submitted to the Province's Representative reporting on the following items:
 - (A) all employment provided to date in furtherance of achieving the Indigenous Requirements, including the status of the Design-Builder's achievement in respect of the Minimum Indigenous Employment Requirement for the current Contract Year, with reference to the priority areas identified for each Identified Indigenous Group in accordance with Section 1.2(c)(iii) of this Schedule;
 - (B) all contracts entered into to date in furtherance of achieving the Indigenous Requirements, including the status of the Design-Builder's achievement in respect of the identified milestones for the Minimum Indigenous Contracts Requirement, with reference to the priority areas identified for each Identified Indigenous Group in accordance with Section 1.2(c)(iii) of this Schedule, and the efforts made by the Design-

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Builder to achieve an equitable allocation of realized contracting opportunities among the Identified Indigenous Groups in accordance with Section 1.1(b) of this Schedule;

- (C) explanations for any variances between the status of the Design-Builder's realized achievements referenced in paragraphs (A) and (B) above and the planned achievements as identified in the Indigenous Participation Plan, and
 - (D) any remedial actions or improvements or updates to the Indigenous Participation Plan that may be necessary to achieve the Indigenous Requirements; and
- (xiii) a format of a final report to be submitted to the Province's Representative prior to Total Completion which:
- (A) summarizes all employment provided to and contracts entered into with the Identified Indigenous Groups throughout the Project, both on an aggregate basis and reported separately for each Identified Indigenous Group; and
 - (B) sets out the Design-Builder's achievement in respect of:
 - (1) the Minimum Indigenous Employment Requirement for the final Contract Year; and
 - (2) the Minimum Indigenous Contracts Requirement.

1.3 Indigenous Contracting and Employment Coordinator

- (a) The Design-Builder's Indigenous Contracting and Employment Coordinator will be a Key Individual subject to the requirements of Schedule 2 [Representatives, Review Procedure and Consent Procedure].
- (b) The Design-Builder's Indigenous Contracting and Employment Coordinator will have excellent communication skills and proven skill and experience in:
 - (i) planning, coordinating and implementing Indigenous procurement and employment opportunities on infrastructure projects;
 - (ii) developing and maintaining productive working relationships with Indigenous communities in relation to employment and contracting processes; and
 - (iii) project management and procurement on infrastructure construction projects.
- (c) Without limiting the generality of the foregoing, the job specification and responsibilities of the Indigenous Contracting and Employment Coordinator will include the following in relation to employment and contract opportunities:
 - (i) establishing and maintaining productive working relationships with the Identified Indigenous Groups;

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- (ii) developing, administering and managing the day-to-day implementation of the Indigenous Participation Plan;
- (iii) undertaking tracking and reporting in relation to the implementation of the Indigenous Participation Plan and the Indigenous Requirements; and
- (iv) updating the Indigenous Participation Plan with input from Identified Indigenous Groups.

1.4 Amendment of Indigenous Requirements

The Design-Builder may at any time submit to the Province's Representative for acceptance, acting reasonably, in accordance with the Consent Procedure any proposed revision to the Indigenous Requirements (as the same may previously have been revised in accordance with this Section 1.4) or any part thereof. If any such proposed revision is accepted by the Province in accordance with the Consent Procedure, then the Indigenous Requirements as so revised shall be the Indigenous Requirements for the purposes of this Agreement, subject to any further revision accepted by the Province, acting reasonably, in accordance with the Consent Procedure. For greater certainty, no payment shall be made by the Province to the Design-Builder as a consequence of implementation of a revision to the Indigenous Requirements pursuant to this Section 1.4 (including, for greater certainty, any revisions to the Indigenous Requirements resulting from the implementation of any additional contract opportunities contemplated by Section 1.1(g) of this Schedule).

1.5 Failure to Meet Indigenous Requirements

- (a) The Design-Builder acknowledges that the achievement of the Minimum Indigenous Contracts Requirement is crucial to the purpose and objectives of the Indigenous Requirements and that if the Design-Builder fails to meet the Minimum Indigenous Contracts Requirement, the Province will not be obtaining the level of Project Work assumed to be included in the payments to be made to the Design-Builder hereunder, may suffer losses and damages associated with the Project Work that are difficult to quantify in advance and that are reflected in the payment set out in Section 1.5(b)(iii) of this Schedule.
- (b) In the event that the Design-Builder fails to meet:
 - (i) in any Contract Year, the Minimum Indigenous Employment Requirement, the Design-Builder and the Province shall, without prejudice to any other right or remedy available to the Province and BCTFA, including the assignment of NCE Points and/or Default Points pursuant to Schedule 10 [Payment and Performance Mechanism], meet to determine an appropriate remedial strategy to address such failure, provided that, at the option of the Province, the Design-Builder shall, along with the Province, meet with each Identified Indigenous Group in order to seek the views of that Identified Indigenous Group in relation to an appropriate remedial strategy;
 - (ii) any milestone for the attainment of each Minimum Indigenous Contracts Requirement as set out in the Indigenous Participation Plan, the Design-Builder and the Province shall meet to determine an appropriate remedial strategy to address such failure, provided that, at the option of the Province, the Design-Builder shall, along with the Province, meet with each Identified Indigenous

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Group in order to seek the views of that Identified Indigenous Group in relation to an appropriate remedial strategy; and

- (iii) for the period from the Effective Date to the Substantial Completion Date, the Minimum Indigenous Contracts Requirement, such failure shall be a Non-Compliance Event and the Design-Builder shall pay to the Province in respect thereof 10% of the amount by which the Minimum Indigenous Contracts Requirement exceeds the total value of contracts provided by the Design-Builder to the Identified Indigenous Groups during such period.
- (c) Despite anything else in this Section 1.5, and without limiting the generality of Section 18.6 [Waiver] and Section 4.3(b) of Schedule 10 [Payment and Performance Mechanism], the Province expressly reserves the right to waive the obligation to pay all or any portion of any Non-Compliance Event Payment otherwise payable pursuant to Section 1.5(b) of this Schedule if and to the extent that the Design-Builder demonstrates that its failure to meet the Minimum Indigenous Contracts Requirement results from insufficient businesses associated with the Identified Indigenous Groups having been identified by the Identified Indigenous Groups in accordance with Section 1.1(b) of this Schedule.

1.6 Indigenous Requirements Reporting

The Design-Builder shall submit to the Province's Representative in accordance with the Consent Procedure:

PIR1.6a on a monthly basis from the Effective Date until the Total Completion Date, the monthly report referred to in Section 1.2(c)(xii); and

PIR1.6b on or before the Total Completion Date, the final report referred to in Section 1.2(c)(xiii) of this Schedule,

and provide to the Province such other documentation and information in respect of the Indigenous Participation Plan as the Province may reasonably request.

PART 2 OTHER INDIGENOUS MATTERS

2.1 Cooperation with Consultation

The Design-Builder shall, at its own reasonable cost and expense (except to the extent expressly provided otherwise in this Agreement), having regard to and without detracting in any way from the Indigenous Requirements and the Design-Builder's other obligations contained in this Agreement, cooperate with and assist the Province in connection with any consultations with any Indigenous group on issues pertaining to the Project.

2.2 Other Agreements with Indigenous Groups

In addition to the Indigenous Requirements, the Design-Builder shall observe and cause all of its Principal Contractors, Subcontractors and any other person for whom the Design-Builder is in law responsible to observe the terms and conditions of any agreement between the Province and any Indigenous group with respect to the Project to the extent that such terms and conditions are disclosed

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from time to time by the Province to the Design-Builder and the Province requires the Design-Builder to observe such terms and conditions, and the Design-Builder shall not in the course of exercising its rights or performing its obligations under this Agreement take or omit to take or permit to be taken or omitted any action that would breach any such terms and conditions. Any requirement to comply imposed by the Province pursuant to this Section 2.2 shall constitute a Province Change.

2.3 Acknowledgement by the Province

As between the Province and the Design-Builder, the Province acknowledges that it is responsible for responding to any court proceeding alleging infringement of Indigenous rights or alleging that the Province has failed to discharge legal obligations of consultation and accommodation.

**SCHEDULE 23
PRIVACY PROTECTION**

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1. Definitions

1.1 In this Schedule,

- (a) “**access**” means disclosure by the provision of access;
- (b) “**contact information**” means information to enable an individual at a place of business to be contacted and includes the name, position name or title, business telephone number, business address, business email or business fax number of the individual;
- (c) “**Personal Information**” has the meaning given in Schedule 1 [Definitions and Interpretation]; and
- (d) “**privacy course**” means the Province’s online privacy and information sharing training course.

2. Purpose

2.1 The purpose of this Schedule is to:

- (a) enable the Province to comply with the Province’s statutory obligations under FOIPPA with respect to Personal Information; and
- (b) ensure that, as a service provider, the Design-Builder is aware of and complies with the Design-Builder’s statutory obligations under FOIPPA with respect to Personal Information.

3. Collection of Personal Information

3.1 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Design-Builder may only collect or create Personal Information that is necessary for the performance of the Design-Builder’s obligations, or the exercise of the Design-Builder’s rights, under this Agreement.

3.2 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Design-Builder must collect Personal Information directly from the individual the information is about.

3.3 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Design-Builder must tell an individual from whom the Design-Builder collects Personal Information:

- (a) the purpose for collecting it;
- (b) the legal authority for collecting it; and
- (c) the title, business address and business telephone number of the person designated by the Province to answer questions about the Design-Builder’s collection of Personal Information.

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4. Privacy Training

4.1 The Design-Builder must ensure that each person who will provide services under this Agreement that involve the collection or creation of Personal Information will complete, at the Design-Builder's expense, the privacy course prior to that person providing those services.

4.2 The requirement in Section 4.1 will only apply to persons who have not previously completed the privacy course.

5. Accuracy of Personal Information

5.1 The Design-Builder must make every reasonable effort to ensure the accuracy and completeness of any Personal Information to be used by the Design-Builder or the Province to make a decision that directly affects the individual the information is about.

6. Requests for Access to Personal Information

6.1 If the Design-Builder receives a request for access to Personal Information from a person other than the Province, the Design-Builder must promptly advise the person to make the request to the Province unless this Agreement expressly requires the Design-Builder to provide such access, and, if the Province has advised the Design-Builder of the name or title and contact information of an official of the Province to whom such requests are to be made, the Design-Builder must also promptly provide that official's name or title and contact information to the person making the request.

7. Correction of Personal Information

7.1 Within 5 Business Days of receiving a written direction from the Province to correct or annotate any Personal Information, the Design-Builder must annotate or correct the information in accordance with the direction.

7.2 When issuing a written direction under Section 7.1, the Province must advise the Design-Builder of the date the correction request to which the direction relates was received by the Province in order that the Design-Builder may comply with Section 7.3.

7.3 Within 5 Business Days of correcting or annotating any Personal Information under Section 7.1, the Design-Builder must provide the corrected or annotated information to any party to whom, within one year prior to the date the correction request was made to the Province, the Design-Builder disclosed the information being corrected or annotated.

7.4 If the Design-Builder receives a request for correction of Personal Information from a person other than the Province, the Design-Builder must promptly advise the person to make the request to the Province and, if the Province has advised the Design-Builder of the name or title and contact information of an official of the Province to whom such requests are to be made, the Design-Builder must also promptly provide that official's name or title and contact information to the person making the request.

8. Protection of Personal Information

8.1 The Design-Builder must protect Personal Information by making reasonable security arrangements against such risks as unauthorized access, collection, use, disclosure or disposal, including any expressly set out in this Agreement.

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9. Storage and Access to Personal Information

9.1 Unless the Province otherwise directs in writing, the Design-Builder must not store Personal Information outside Canada or permit access to Personal Information from outside Canada.

10. Retention of Personal Information

10.1 Unless this Agreement otherwise specifies, the Design-Builder must retain Personal Information until directed by the Province in writing to dispose of it or deliver it as specified in the direction.

11. Use of Personal Information

11.1 Unless the Province otherwise directs in writing, the Design-Builder may only use Personal Information if that use is for the performance of the Design-Builder's obligations, or the exercise of the Design-Builder's rights, under this Agreement.

12. Disclosure of Personal Information

12.1 Unless the Province otherwise directs in writing, the Design-Builder may only disclose Personal Information inside Canada to any person other than the Province if the disclosure is for the performance of the Design-Builder's obligations, or the exercise of the Design-Builder's rights, under this Agreement.

12.2 Unless this Agreement otherwise specifies or the Province otherwise directs in writing, the Design-Builder must not disclose Personal Information outside Canada.

13. Notice of Foreign Demands for Disclosure

13.1 In addition to any obligation the Design-Builder may have to provide the notification contemplated by section 30.2 of FOIPPA, if in relation to Personal Information in the custody or under the control of the Design-Builder, the Design-Builder:

- (a) receives a foreign demand for disclosure;
- (b) receives a request to disclose, produce or provide access that the Design-Builder knows or has reason to suspect is for the purpose of responding to a foreign demand for disclosure; or
- (c) has reason to suspect that an unauthorized disclosure of Personal Information has occurred in response to a foreign demand for disclosure,

the Design-Builder must immediately notify the Province and, in so doing, provide the information described in section 30.2(3) of FOIPPA. In this Section 13.1, the phrases "foreign demand for disclosure" and "unauthorized disclosure of personal information" will bear the same meanings as in section 30.2 of FOIPPA.

14. Notice of Unauthorized Disclosure

14.1 In addition to any obligation the Design-Builder may have to provide the notification contemplated by section 30.5 of FOIPPA, if the Design-Builder knows that there has been an unauthorized disclosure of Personal Information in the custody or under the control of the Design-Builder, the Design-Builder must immediately notify the Province. In this Section 14.1, the phrase

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“unauthorized disclosure of personal information” will bear the same meaning as in section 30.5 of FOIPPA.

15. Inspection of Personal Information

15.1 In addition to any other rights of inspection the Province may have under this Agreement or under statute, the Province may, at any reasonable time and on reasonable notice to the Design-Builder, enter on the Design-Builder's premises to inspect any Personal Information in the possession of the Design-Builder or any of the Design-Builder's information management policies or practices relevant to the Design-Builder's management of Personal Information or the Design-Builder's compliance with this Schedule and the Design-Builder must permit, and provide reasonable assistance to, any such inspection.

16. Compliance with FOIPPA and Directions

16.1 The Design-Builder must in relation to Personal Information comply with:

- (a) the requirements of FOIPPA applicable to the Design-Builder as a service provider, including any applicable order of the commissioner under FOIPPA; and
- (b) any direction given by the Province under this Schedule.

16.2 The Design-Builder acknowledges that it is familiar with the requirements of FOIPPA governing Personal Information that are applicable to it as a service provider.

17. Notice of Non-Compliance

17.1 If for any reason the Design-Builder does not comply, or anticipates that it will be unable to comply, with a provision in this Schedule in any respect, the Design-Builder must promptly notify the Province of the particulars of the non-compliance or anticipated non-compliance and what steps it proposes to take to address, or prevent recurrence of, the non-compliance or anticipated non-compliance.

18. Interpretation

18.1 In this Schedule, references to sections by number are to sections of this Schedule unless otherwise specified in this Schedule.

18.2 Any reference to the “Design-Builder” in this Schedule includes any subcontractor or agent retained by the Design-Builder to perform obligations under this Agreement and the Design-Builder must ensure that any such subcontractors and agents comply with this Schedule.

18.3 The obligations of the Design-Builder in this Schedule will survive the termination of this Agreement.

18.4 If a provision of this Agreement (including any direction given by the Province under this Schedule) conflicts with a requirement of FOIPPA or an applicable order of the commissioner under FOIPPA, the conflicting provision of this Agreement (or direction) will be inoperative to the extent of the conflict.

18.5 The Design-Builder must comply with the provisions of this Schedule despite any conflicting provision of this Agreement or, subject to Section 18.6, the law of any jurisdiction outside Canada.

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18.6 Nothing in this Schedule requires the Design-Builder to contravene the law of any jurisdiction outside Canada unless such contravention is required to comply with FOIPPA.