

PART 3 OF SCHEDULE 5

DESIGN AND CERTIFICATION PROCEDURE

Section A: General

INTERPRETATION

1. This Design and Certification Procedure applies throughout the Contract Period to all Design Data prepared or adopted by the Concessionaire in connection with any of the following, which, for the purposes of this Part 3, shall be known as “Proposals”:
 - 1.1 the Detailed Design of the Works and the Decommissioning, including further design work once a TAF has been subject to the Review Procedure;
 - 1.2 any proposed Concessionaire Change or Province Change;
 - 1.3 any proposed Improvement;
 - 1.4 any proposed Capital Works, Reinstatement Works or Renewal Works;
 - 1.5 any assessment of a Structure; and
 - 1.6 any other works proposed by the Concessionaire (other than pursuant to a Subsequent Scheme) which may affect the structural integrity of Structures, pavements or any other improvement forming part of the Project Facilities (provided that in the case of an emergency the Concessionaire may proceed with such measures as are immediately necessary for the protection of persons, or property, or both prior to complying with the applicable provisions of this Design and Certification Procedure, in which case the Concessionaire will comply with the provisions of this Design and Certification Procedure otherwise applicable to those measures as soon as reasonably possible under the circumstances).
2. In this Part 3:
 - 2.1 “Audit Team” means such persons as may be appointed for the time being in accordance with the relevant provisions of this Agreement to carry out a Road Safety Audit. The Audit Team shall include not less than three individuals with appropriate road safety training and experience and relevant road safety audit experience.
 - 2.2 “Category” means the classification given to a Structure in accordance with paragraph 26 having regard to its structural complexity, which determines the form of independent check required. For greater certainty, the Category descriptions for Structures set out in paragraph 26 are to be used for purposes of

this Part 3, and are without prejudice to any other or different category descriptions provided for elsewhere in this Agreement or in any of the Technical Requirements or pursuant to any applicable professional standards or practices for any other purposes.

- 2.3 “Checking Team” means the group of engineers within the Designer actually undertaking a design check of a Structure.
- 2.4 “Concept Review” means a concept review of Design Data in accordance with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC) Bylaw 14(b) – Quality Management and in accordance with the APEGBC Guidelines for Professional Concept Review, August 1994, as such Bylaw and Guidelines may be amended, supplemented or replaced from time to time.
- 2.5 “Design Team” means the group of engineers within the Designer actually undertaking the design or assessment of the Project Facilities or any other works in connection with the design, construction, operation, maintenance, rehabilitation or improvement of the Project Facilities.
- 2.6 “M&E TAF” means a technical appraisal form relating to the mechanical and electrical functions of a Structure in such form as the Province’s Representative shall reasonably require.
- 2.7 “Principal” means a senior representative employed by the Concessionaire, Contractor, Designer, Audit Team or Reviewer who has been designated in writing by the Concessionaire, Contractor, Designer, Audit Team or Reviewer to the Province as having authority to sign Certificates on behalf of the Concessionaire, Contractor, Designer, Audit Team or Reviewer. The Concessionaire warrants to the Province that each Principal shall have the required professional qualifications and appropriate experience to sign such Certificates.
- 2.8 “Strengthened Earthwork” means:
- 2.8.1 soil or other material, either placed or in situ, the stability of which has been improved by tensile reinforcement acting through interface friction, bearing or other means (such as reinforced soil or soil nailing) or by external support such as gabions, where the slope of the face is less than 70 deg. to the horizontal; and
- 2.8.2 retaining walls where the retained height is less than 1.5 metres.

- 2.9 “TAF” means a technical appraisal form in the form shown in Annex 2(1) to this Part 3.
- 2.10 “Technical Appraisal Authority” means a department of the MOT or any other relevant highway authority or other person designated in writing by the Province’s Representative to the Concessionaire as being responsible for carrying out a review of any Proposal under this Part 3.
- 2.11 “Temporary Works” has the meaning given in Schedule 1 [Definitions and Interpretation].
- 2.12 A reference (including, for greater certainty, in any Certificate submitted pursuant hereto) to Design Data or a Certificate to which there has been “no objection” under the Review Procedure is a reference to Design Data or a Certificate which has been subject to the Review Procedure and has been returned (or deemed returned) marked “received” or returned marked “received with comments”, in the latter case the Design Data or Certificate having been amended to accord with such comments.
- 2.13 A reference to a Design Certificate means in the case of Design Data referred to in paragraph 12 a Design Certificate (Geotechnical), in the case of Design Data relating to a Structure a Design Certificate (Structures) and in all other cases a Design Certificate (General), as applicable.
- 2.14 For greater certainty, where the Province’s Representative is authorized or permitted to conduct any inspection, to attend at any test or other event or to take any other action or exercise any other right pursuant to the terms of this Part 3 or any other provision of this Agreement, such inspection may be conducted, such test or other event may be attended, such action may be taken or such right may be exercised for and on behalf of the Province’s Representative by a contractor, consultant or other person designated by the Province’s Representative.
- 2.15 For greater certainty, a requirement for certification or for any check or review pursuant to and for purposes of this Part 3 is in addition to, and does not in any way limit, qualify, replace or relieve the Concessionaire or any other relevant person from the obligation to comply with, any other certification, check or review requirement provided elsewhere in this Agreement or in any of the Technical Requirements or pursuant to any applicable professional standards or practices.
- 2.16 References to a paragraph are, unless otherwise indicated, references to a paragraph of this Part 3.

GENERAL

3. Subject to paragraph 4 of Section A of this Part 3, all Design Data required in connection with a Proposal shall be prepared or adopted by or under the supervision of the Designer. Prior to the submission of any Design Data in respect of any Proposal to the Province's Representative in accordance with paragraph 5, the Designer shall:
 - 3.1 satisfy itself that the Design Data meets all Technical Requirements and otherwise complies with the requirements of this Agreement and (other than for interim Design Data) shall issue a Design Certificate in respect of the same; and
 - 3.2 in the case of a Structure (including, for greater certainty, the assessment of a Structure) or Strengthened Earthwork, submit the relevant Design Data to be checked in accordance with this Part 3.
4. Notwithstanding paragraph 3 of Section A of this Part 3, Design Data for Temporary Works may be prepared by a professional engineer registered in British Columbia employed by the Contractor. In respect of Temporary Works:
 - 4.1 either the Contractor or the Designer (as the case may be) shall satisfy itself that the Design Data for the Temporary Works meets all applicable Technical Requirements and otherwise complies with the requirements of this Agreement and, where required by paragraphs 5 and 6 of Section A of this Part 3, shall issue a Design Certificate in respect of the same; and
 - 4.2 the Designer shall, in the case of Temporary Works referred to in paragraphs 44 and 45, check such Design Data in accordance with paragraph 46.
5. Subject to paragraph 6 of Section A of this Part 3, all Design Data prepared or adopted in connection with a Proposal (including any Design Data required to be submitted on an interim basis in connection with the design of any element of the Works or the Decommissioning or any other works the subject of a Proposal) shall be submitted to the Province's Representative in accordance with the Review Procedure. Such Design Data (other than interim Design Data) shall be accompanied by all relevant Design Certificates. Unless a different period is specified for a particular class of Design Data in this Part 3 or elsewhere in this Agreement, the review time for Design Data submitted for review in accordance with the Review Procedure pursuant to this Part 3 shall be 20 Working Days.
6. The following are not required to be submitted to the Province's Representative unless expressly requested by the Province's Representative:
 - 6.1 calculations, in the case of any submission of interim Design Data;

- 6.2 steel reinforcing bar schedules; and
- 6.3 Design Data in respect of Temporary Works, except Temporary Works referred to in paragraphs 44 and 45.
- 7. Without prejudice to paragraph 3.11 of Part 2 of Schedule 8 [Review Procedure], if any Design Data submitted to the Province's Representative does not accord with the Technical Requirements or any other requirements of this Agreement, the Province's Representative may so notify the Concessionaire and the Concessionaire shall either:
 - 7.1 cause to be made such alterations and additions as may be necessary such that the Design Data accords with the Technical Requirements and all other requirements of this Agreement; or
 - 7.2 subject to the other provisions of this Agreement including those relating to Concessionaire Changes, propose an Alternative Concept (in which case the provisions of Section B of this Part 3 shall apply).
- 8. The Designer shall issue (if and when required in accordance with the relevant provisions of this Agreement) Province Change Certificates in accordance with Schedule 13 [Changes].
- 8A. The Concessionaire's Representative shall issue (if and when required in accordance with the relevant provisions of this Agreement):
 - 8A.1 Concessionaire Change Certificates in accordance with Section 11.4 [Concessionaire Changes]; and
 - 8A.2 Alternative Concept Certificates in accordance with Section 14.6 [Maintenance and Other Works].
- 9. All parties signing Certificates shall clearly print their name and position held in their organization. Except as provided in paragraphs 11 and 12, all Certificates shall be signed by a Principal of the organization concerned, who shall be a professional engineer of an appropriate discipline registered in British Columbia who shall affix his or her seal to the Certificate.
- 10. All Certificates together with the supporting documentation shall be submitted to the Province's Representative in duplicate with original signatures, seals and registration numbers and in such form as to allow the Province's Representative to perform its function in respect of such Certificate without delay. Where required by the provisions of this Part 3, the Province's Representative shall complete the Certificate in accordance with the Review Procedure and return a copy to the Designer.

ARCHAEOLOGICAL, LANDSCAPING AND ENVIRONMENTAL WORK

11. The Designer shall submit Design Data in respect of any archaeological work, landscaping work or environmental work with the appropriate Design Certificate sealed and signed by the duly experienced professional of the appropriate discipline registered in British Columbia.

GEOTECHNICAL WORKS

12. In respect of geotechnical elements of the Works or of any other works the subject of a Proposal which in either case are not associated with Structures (including Strengthened Earthworks), the Designer shall issue and submit to the Province's Representative in accordance with the Review Procedure a Design Certificate (Geotechnical) sealed and signed by the duly experienced professional geotechnical engineer, registered in British Columbia, together with the submission of Design Data in accordance with paragraph 5 of Section A of this Part 3.

TESTING

13. To the extent and in the manner provided by the Quality Documentation and other Technical Requirements, all testing shall be carried out by a duly accredited and certified testing facility and (except for categories of tests (if any) in respect of which the Province's Representative gives written notice to the Concessionaire that it does not require such notice) the Province's Representative shall be given timely advance notice (being not less than 2 Working Days) of the date of such tests. The Province's Representative shall be entitled to attend at any test. Any materials or Plant which fail such tests shall be rejected. The Concessionaire may submit to the Province's Representative as a Concessionaire Change any proposal or information to support the acceptance of any rejected materials or Plant. The Concessionaire shall develop a test recording system which will permit ready retrieval of all test readings and shall provide test readings to the Province's Representative on request. With respect to continuous testing operations (such as concrete quality, structural concrete strengths, aggregate quality, compaction tests and bituminous material quality) the Concessionaire 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.
14. Any part of the Works the design of which is the responsibility of the Concessionaire or any other works the subject of a Proposal that does not accord with the Technical Requirements shall be rejected. The Concessionaire may submit to the Province's Representative as a Concessionaire Change any proposal or information to support the acceptance of the rejected part of the works.

ROAD SAFETY AUDITS

15. All Design Data prepared or adopted in connection with a Proposal (and, in respect of an audit validation pursuant to paragraph 16.3, the New Highway or other relevant works) shall be subject to road safety audits as and where required pursuant to the provisions of the Technical Requirements and the other provisions of this Agreement, and the relevant Design Data in respect of the road safety audits in the required form together with the results of all relevant calculations will be submitted by the Concessionaire to the Province's Representative. Prior to commencing any road safety audit, the Concessionaire shall submit to the Province's Representative under the Review Procedure a proposal as to the Audit Team. The Province's Representative shall conduct the review within 10 Working Days and may object to such proposal only on the grounds that:
- 15.1 the proposed Audit Team is not independent of the Designer; or
 - 15.2 the proposed Audit Team does not have levels of road safety engineering work and accident investigation and prevention experience, training and audit experience appropriate to the road safety audit to be carried out or otherwise does not meet the requirements set forth in the Technical Requirements.
16. The road safety audits will be submitted to the Province's Representative for validation at three stages as follows:
- 16.1 Stage 1 Audit

On completion of preliminary design, unless otherwise agreed by the Province's Representative.
 - 16.2 Stage 2 Audit

On completion of detailed design and prior to commencement of construction of the relevant works.
 - 16.3 Stage 3 Audit

Immediately prior to the Concessionaire giving a notice to the Independent Certifier pursuant to Section 13.1.1 or 13.2.1 or notice to the Province's Representative pursuant to Section 19.7.14 or immediately prior to the Concessionaire requesting payment of insurance proceeds or conforming amount of invoice payable under Section 20.7.2 or 20.7.3 with respect to the relevant works or the relevant works otherwise being used as a highway.
17. At each relevant road safety audit validation stage the Concessionaire shall submit the relevant Audit Team report to the Province's Representative for review.
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18. Except as otherwise expressly agreed in writing by the Province's Representative, the Concessionaire shall implement after each road safety audit all recommendations properly made by the Audit Team that are advisable for the performance by the Concessionaire of its obligations under this Agreement and the Concessionaire shall be entitled to dispute the road safety audit recommendations pursuant to the Disputes Resolution Procedure.
19. The Concessionaire shall, after implementation of all recommendations required to be implemented pursuant to paragraph 18 of this Part 3 (other than those expressly agreed by the Province's Representative), submit to the Province's Representative a Road Safety Audit Certificate in relation to the relevant road safety audit validation stage signed by the Designer, the Audit Team, the Contractor and the Concessionaire's Representative. The Concessionaire's Substantial Completion Certificate shall not be issued unless a Stage 3 Road Safety Audit Certificate in relation to the New Highway has been submitted.

CONSTRUCTION

20. During the construction of any Works, or during the Decommissioning or any other works that are the subject of a Proposal, the Designer shall, in accordance with the procedures set out in the relevant Quality Documentation or other Technical Requirements, examine the same and satisfy itself that such works and every part thereof have been designed, constructed, completed, commissioned, tested and maintained in all respects so as to accord with:
 - 20.1 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
 - 20.2 all applicable Technical Requirements,and otherwise to comply in all respects with the requirements of this Agreement.
21. The Concessionaire shall, from time to time in accordance with the procedures set out in the relevant Quality Documentation or other Technical Requirements, provide Construction Certificates to the Province's Representative. All Construction Certificates shall be signed by the Concessionaire's Representative, the Designer and the Contractor.

SUBSTANTIAL COMPLETION CERTIFICATE AND COMPLETION CERTIFICATE

22. The Concessionaire shall provide to the Province's Representative a Concessionaire's Substantial Completion Certificate in respect of the Works. The Concessionaire's Substantial Completion Certificate shall only be issued after:
 - 22.1 all Construction Certificates in respect of the Works have been issued;

22.2 a Stage 3 Road Safety Audit Certificate in respect of the New Highway has been issued pursuant to paragraph 19 of this Part 3; and

22.3 all relevant quality assurance audits have been satisfactorily completed in accordance with the Quality Documentation and provided to the Province showing that the Works have been Substantially Completed in accordance with applicable Technical Requirements,

A Concessionaire's Substantial Completion Certificate must be issued prior to an application by the Concessionaire under Section 13.1.1 of this Agreement for the issue of a Substantial Completion Certificate.

23. The Concessionaire shall provide to the Province's Representative a Concessionaire's Completion Certificate upon completion of the Works and the Decommissioning. The Concessionaire's Completion Certificate shall only be issued after:

23.1 Construction Certificates in respect of all the Works and the Decommissioning have been issued;

23.2 a Stage 3 Road Safety Audit Certificate in respect of the New Highway has been issued; and

23.3 all relevant quality assurance audits have been satisfactorily completed in accordance with the Quality Documentation and provided to the Province showing that the Works and the Decommissioning have achieved Completion in accordance with all applicable Technical Requirements.

A Concessionaire's Completion Certificate must be issued prior to an application under Section 13.2.2 of this Agreement for the issue of a Completion Certificate in respect of the Works and Decommissioning.

24. The Concessionaire's Substantial Completion Certificate and the Concessionaire's Completion Certificate shall be signed by the Concessionaire's Representative, the Designer and the Contractor.

CHECKING REQUIREMENTS FOR STRUCTURES AND STRENGTHENED EARTHWORKS

25. 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 the Categories referred to in paragraph 26.

26. The Categories of Structure are as follows:

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 retaining wall with less than 3m retained height; or
- (iv) an environmental barrier not greater than 3m high.

Category I. Simple individual Structures provided they conform to one of the following:

- (i) an environmental barrier more than 3m high;
- (ii) a retaining wall with 3m or more than 3m and less than 7m retained height;
- (iii) a buried concrete box or corrugated steel buried Structure with less than 8m span; or
- (iv) a Structure with a simply supported single span of less than 20m and having less than 25 deg. skew.

Category II. All those Structures not within the parameters of Categories 0, I or III.

Category III. Structures which:

- (i) require sophisticated analysis; or
- (ii) contain high structural redundancy; or
- (iii) contain unconventional design aspects; or
- (iv) have any span exceeding 50m; or
- (v) have a skew exceeding 45 deg.; or
- (vi) have difficult foundation problems,

and in any event including 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.

27. Subject to paragraph 28, as soon as sufficient Design Data for a Structure has been prepared to allow the determination of a Category, the Concessionaire 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. The Province's Representative shall complete the review within 10 Working Days and be entitled to object to such proposed Category only on the ground that it is not consistent with the definitions of Categories in paragraph 26.

28. The assessment of existing Structures (whether existing on the date of this Agreement or constructed as part of the Works) 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's Representative.
29. Design Data relating to each Structure or Strengthened Earthwork (including assessments, drawings and bar schedules) shall be checked as follows:
 - 29.1 Category 0 and Category I Structures require an independent check by a professional engineer, registered in British Columbia, other than the engineer who designed the Structure. The checking engineer may be from the original Design Team.
 - 29.2 Strengthened Earthworks, Category II and Category III Structures require a check by a Checking Team which may be from the Designer but shall be independent of the Design Team.
 - 29.3 Category III Structures require the Concept Review to be carried out by a Reviewer appointed in accordance with paragraph 30.

All Structures shall have a Concept Review.

REVIEWER

30. At the time it submits a TAF in respect of a Category III Structure, the Concessionaire shall submit to the Province's Representative under the Review Procedure a proposal as to the organization or individual to serve as Reviewer in respect of that Structure and the proposed terms and conditions of its employment. The Province's Representative shall complete the review within 10 Working Days. The proposal shall be supported by a C.V. for each member of the reviewing team. The Province's Representative may object to such proposed Reviewer only on the grounds that the organization or individual proposed as Reviewer:
 - 30.1 if the TAF relates to something other than the Concessionaire's design of the Works, is not independent of the Designer and the Contractor; or
 - 30.2 does not have sufficient knowledge and experience relating to the type of Structure to be examined properly to perform the check,

and may object to such proposed terms and conditions of employment only on the ground that they are not in accordance with Good Industry Practice or the provisions of this Agreement.

DESIGN CHECKING AND REVIEWING PROCEDURE

31. The form and detail of the design check and Concept Review is for the checking engineer, Checking Team or Reviewer (as applicable) to decide.
32. The Design Team, Designer, checking engineer, Checking Team and Reviewer 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 checking engineer, Checking Team and Reviewer shall each also be responsible for its own interpretation of the relevant ground information.
33. Independence of the Design Team and Checking Team and of the Designer and the Reviewer 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.

TECHNICAL APPRAISAL SUBMISSIONS

34. Without limiting paragraph 5 of Section A of this Part 3, no Design Data relating to any Structure other than those in Category 0 and no Design Data relating to any Strengthened Earthwork shall be submitted to the Province's Representative unless:
 - 34.1 a completed TAF has already been provided; or
 - 34.2 the submission includes a completed TAF.
35. If the Concessionaire makes a submission of Design Data relating to a Structure or a Strengthened Earthwork at a time when there is no completed TAF in respect of such Structure or Strengthened Earthwork to which there has been no objection under the Review Procedure, then the time period for review under the Review Procedure of such submission of Design Data shall not begin to run until the date on which a completed TAF has been submitted in respect of such Structure or Strengthened Earthwork and there has been no objection to it under the Review Procedure.
36. Any submission of a TAF shall be made to the Province's Representative in accordance with the Review Procedure and shall include the information required by the Model Technical Appraisal Form set out in Annex 2(1) to this Part 3. The TAF shall be signed by the Designer and the Concessionaire's Representative.
37. The time periods set out in Annex 3 or Annex 4 (as applicable) to this Part 3 shall apply in relation to a submission of a TAF under the Review Procedure and take into account

the requirement for the relevant Technical Appraisal Authority to be involved in the review of the TAF under the Review Procedure. The Province's Representative may make comments in respect of a TAF submitted under the Review Procedure only on the grounds that:

- 37.1 the TAF is incomplete;
 - 37.2 the proposals in the TAF are not in accordance with the Technical Requirements or the other provisions of this Agreement; or
 - 37.3 the proposals in the TAF are not in accordance with Good Industry Practice.
38. Acceptance of each TAF shall be confirmed by countersignature of the TAF on behalf of the Province.
39. Without limiting paragraph 3 of Section B of this Part 3, any variation which the Designer wishes to make to a TAF which has been subject to the Review Procedure during design, assessment or construction shall be submitted in accordance with the Review Procedure as an addendum to the TAF, and there shall have been no objection thereto under the Review Procedure before it is implemented.
40. In any case where a Structure (including a road tunnel, movable bridge or access gantry) involves mechanical or electrical functions, the Concessionaire shall, if requested by the Province's Representative, submit to the Province's Representative an M&E TAF in addition to the TAF in respect of such Structure. The provisions of paragraphs 34 to 39 shall apply *mutatis mutandis* to such M&E TAF, as though references therein to a TAF were references to an M&E TAF and references to Design Data relating to a Structure were references to Design Data relating to the mechanical and electrical functions in respect of such Structure. The check of the Design Data in respect of mechanical and electrical functions shall be equivalent to the check required by paragraph 29.2.

ASSESSMENT OF STRUCTURES

41. For greater certainty, the technical appraisal, checking and certification procedures in this Part 3 shall apply to:
- 41.1 any assessment of a Structure forming part of the Project Facilities; and
 - 41.2 any resulting proposals for design and construction of alteration and strengthening works in respect of any such Structure.

42. Without limiting the generality of paragraph 41:
- 42.1 a TAF shall be submitted in accordance with paragraphs 34 to 40 in respect of each assessment referred to in paragraph 41.1 and proposal referred to in paragraph 41.2; and
 - 42.2 the Designer shall submit each such assessment and the Design Data in respect of each such proposal to be checked in accordance with this Part 3.
43. Promptly following the assessment of any Structure, the Designer shall issue an Assessment Certificate (Structures) in respect of such Structure.

TEMPORARY WORKS

44. The provisions of paragraph 5 of Section A of this Part 3 shall apply to all Design Data prepared or adopted in connection with any Temporary Works over, supporting any Structure over, under, supporting, alongside or otherwise affecting or potentially affecting any highway or other road or area used by or accessible to the public or that may otherwise adversely impact public safety.
45. In respect of any Temporary Works referred to in paragraph 44 which is a Structure (or involves the complete or partial demolition of an existing Structure), a TAF shall be submitted in accordance with paragraph 36, and the provisions of paragraphs 34, 35 and 37 to 39 shall apply *mutatis mutandis* to any such TAF, provided that the reference in paragraph 37 to the time periods set out in Annexes 3 and 4 to this Part 3 shall be deemed to be a reference to the time periods set out in the relevant part of Annex 5 to this Part 3.
46. Design Data relating to any Temporary Works referred to in paragraph 45 shall be checked as follows:
- 46.1 any such Design Data prepared by or on behalf of the Contractor requires an independent check by the Designer; and
 - 46.2 any such Design Data prepared by the Designer requires an independent check by a Checking Team which may be from the Designer but shall be independent of the Design Team.
- The provisions of paragraphs 25 to 29 shall not apply to any such Design Data.
47. In performing the check pursuant to paragraph 46 the Designer and the Contractor shall each satisfy itself that:
- 47.1 the Design Data meets the Technical Requirements and otherwise complies with the requirements of this Agreement;

- 47.2 the Temporary Works (as a whole and the constituent parts) are satisfactory for the safe and proper discharge of the Concessionaire's relevant obligations; and
- 47.3 the Design Data reflects the requirements of the relevant authorities for all affected highways or other roads or areas used by or accessible to the public other than the Concession Highway.
48. If the Concessionaire proposes to vary or amend the Technical Requirements in respect of any Temporary Works, such proposal together with an explanation of the reason for the proposed change shall be submitted to the Province's Representative in accordance with the Review Procedure. Such proposal shall be dealt with in accordance with the provisions of this Agreement applicable to a Concessionaire Change or an Alternative Concept, as the case may be, provided that the Province's Representative shall be entitled to make comments in respect of any such proposal under the Review Procedure only on the ground that the conduct of any Temporary Works in accordance with the proposal may endanger public or worker safety or the structural integrity of any related primary Structure or any adjacent Structures.
49. 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 Concession Highway, the Concessionaire shall consult the relevant highway authority and the Design Data shall reflect their reasonable requirements.

Section B: Alternative Concepts

1. An “Alternative Concept” means one of the following:
 - 1.1 a Proposal in connection with a Concessionaire Change; or
 - 1.2 a Proposal in connection with an Improvement, Capital Works, Reinstatement Works, Renewal Works or otherwise (other than a Concessionaire Change) which proposes a variation from the Technical Requirements in the design, quality or scope of any of the Project Facilities or any addition, deletion, substitution, alteration in design or variation in the Technical Requirements.
2. Subject to paragraphs 3 and 4 of this Section B, the Concessionaire shall submit any proposal for an Alternative Concept to the Province’s Representative under the Review Procedure in accordance with the applicable provisions of this Agreement.
3. If the Concessionaire intends to make an Alternative Concept in relation to a Structure or in relation to any Temporary Works referred to in paragraph 44 of Section A or in relation to any Strengthened Earthwork, the Designer shall propose such Alternative Concept in the relevant TAF, which shall be accompanied by an Alternative Concept Report in accordance with paragraph 4 of this Section B. Notwithstanding any other provision of this Agreement, the time periods set out in Annex 4 or Annex 5 (as applicable) to this Part 3 shall apply in relation to any submission under the Review Procedure of such an Alternative Concept.
4. Without limitation to the provisions of Part 2 of Schedule 8 [Review Procedure], the submission of an Alternative Concept under the Review Procedure shall be in writing and contain all the relevant data and information, which shall be assembled in a written report (an “Alternative Concept Report”). The nature and scope of the information required shall vary with the proposal under consideration but shall at a minimum address relevant aspects of the following:
 - 4.1 detailed information (including plans) about the existing circumstances and the impact of the Alternative Concept;
 - 4.2 detailed information (including plans) of possible options or schemes that would not require an Alternative Concept;
 - 4.3 reasons for proposing the Alternative Concept (for example, cost, environmental factors, value for money, economics);
 - 4.4 details of the Alternative Concept together with the corresponding existing provisions in the Technical Requirements. Clause numbers in standards or

- specifications relevant to the submission shall be quoted in full, and all proposed changes to existing requirements highlighted;
- 4.5 details of design methodology and specification of the composition, and performance criteria of component materials (including all relevant parameters, such as elastic modulus, creep and deformation characteristics and fatigue resistance);
 - 4.6 specific features of the site or location of the Alternative Concept that might have a bearing on its effectiveness;
 - 4.7 evidence of satisfactory long term performance and corresponding maintenance requirements of the resulting works based on use in circumstances and conditions (including climatic and loading conditions) typical of those for the Alternative Concept; and
 - 4.8 evidence of deterioration characteristics or long term assessment criteria sufficient to establish the condition and Residual Life of Project Facilities constructed in accordance with the Alternative Concept at the end of the Contract Period.
5. No Alternative Concept shall be incorporated into the design or construction of the relevant works until there has been no objection to such Alternative Concept under the Review Procedure.
 6. Each Alternative Concept to which there has been no objection under the Review Procedure shall be considered to be unique to the particular site and circumstances and shall not entitle the Concessionaire to adopt the Alternative Concept in other sites or circumstances.

**ANNEX 1 TO
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ANNEX 1(1) TO
PART 3 OF SCHEDULE 5
CERTIFICATE REF NO. []

DESIGN CERTIFICATE (GENERAL)

In respect of: (Provide details
e.g. Highway/Structure/Rock Retention/Drainage/Environmental/ Geotechnical)

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. 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 the Works or any other works the subject of a Proposal in accordance with Sections 11.4 [Concessionaire Changes] and 14.6 [Maintenance and Other Works] of this Agreement and Part 3 of Schedule 5[Design and Certification Procedure] 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 Technical 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 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 Technical Requirements, as amended by the following:

[List, if any, the changes made by the issue of Change Certificates and Alternative Concept 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.

SCHEDULE

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

Signed:
Designer/Contractor (Principal)⁺
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:

Notes: For geotechnical elements use Certificate at Annex 1(2) and for Structures use Certificate at Annex 1(3)

⁺ The Contractor may sign only in respect of Temporary Works. Delete as appropriate.

ANNEX 1(2) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO []

DESIGN CERTIFICATE (GEOTECHNICAL)

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. 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 geotechnical elements in accordance with Sections 11.3 [Concessionaire Changes] and 14.6 [Maintenance and Other Works] of the Agreement and Part 3 of Schedule 5 [Design and Certification Procedure] 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 applicable Technical Requirements.
2. We certify that the Design Data for geotechnical elements listed in the Schedule hereto and annexed incorporates the results of the relevant ground investigations and their interpretation, that the said Design Data has been prepared by us in accordance with all applicable requirements contained in the Design Quality Management Plan and utilizing the standards of care, skill and diligence that, in accordance with the standards of our profession, are required of experienced professionals undertaking the preparation of such Design Data, and that in our professional opinion such Design Data:
 - i. constitutes an adequate and appropriate design and complies with all applicable Technical Requirements, as amended by the following:

[List, if any, the changes made by the issue of Change Certificates and Alternative Concept Certificates];
 - ii. complies with all applicable design requirements of the Agreement;
 - iii. complies with all applicable standards, codes and current Good Industry Practice;
 - iii. incorporates solutions to all of the reasonably foreseeable geotechnical problems;
and
 - iv. accurately describes and represents the work intended.

SCHEDULE

[Include here drawing numbers and titles and Geotechnical Report, including site data and testing]

Signed:
Designer/Contractor (Principal)⁺
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:

Notes: Geotechnical aspects of Structures are covered by the Technical Appraisal Form and Design Certificate (Structures) and not by this Certificate.

⁺ The Contractor may sign only in respect of Temporary Works. Delete as appropriate.

ANNEX 1(3) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF NO. []

DESIGN CERTIFICATE (STRUCTURES)

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to Okanagan Lake New Crossing Project. 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 Structures incorporated in the Works, in accordance with Sections 11.3 [Concessionaire Changes] and 14.6 [Maintenance and Other Works] of this Agreement and Part 3 of Schedule 5 [Design and Certification Procedure] 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 Technical Requirements.
2. We certify that we have prepared the Design Data for [.....] **[Name and Category 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 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 Technical Requirements, including Technical Appraisal Form No. [.....] dated [.....], as amended by the following:

[List, if any, the changes made by the issue of Change Certificates, Alternative Concept Certificates, and Addenda to the foregoing Technical Appraisal Form];
 - ii. the said Design Data complies with all applicable design requirements of the Agreement;
 - iii. the said Design Data complies with all applicable standards, codes and current Good Industry Practice; and
 - iv. all due account has been taken of the Geotechnical Report for the Structure **[reference number]** [and agreed amendments] **[reference numbers]**.

SCHEDULE

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

Signed:
Designer/Contractor (Principal)⁺⁺
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:

Notes:

⁺⁺ *The Contractor may sign only in respect of Temporary Works. Delete as appropriate.*

ANNEX 1(4) TO PART 3 OF SCHEDULE 5
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 [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. 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 Part 3 of Schedule 5 [Design and Certification Procedure] 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 Part 3 of Schedule 5 to the Agreement, the Design Quality Management Plan and all other relevant provisions of the Agreement and that, except as expressly agreed in writing by the Province’s Representative (copies which are attached hereto), all recommendations in the Audit Team’s report requiring incorporation pursuant to the Agreement have been incorporated in the preliminary design.
2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:

Affix Professional Seal

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Concessionaire's Representative
Name:
Date:

3. Receipt of this Certificate is acknowledged.

Signed:
Province's Representative
Name:
Date:

ANNEX 1(5) TO PART 3 OF SCHEDULE 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 [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. 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 Part 3 of Schedule 5 [Design and certification Procedure] to the Agreement.

1. We certify that the Detailed Design for [.....] has been the subject of a Stage 2 Road Safety Audit in accordance with Part 3 of Schedule 5 to the Agreement, the Design Quality Management Plan and all other relevant provisions of the Agreement and that, except as expressly agreed in writing by the Province’s Representative (copies of which are attached hereto), all recommendations in the Audit Team’s report requiring incorporation pursuant to the Agreement have been incorporated in the Detailed Design.
2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Concessionaire's Representative
Name:
Date:

3. Receipt of this Certificate is acknowledged.

Signed:
Province's Representative
Name:
Date:

ANNEX 1(6) TO PART 3 OF SCHEDULE 5
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 [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. 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 Part 3 of Schedule 5 [Design and Certification Procedure] to the Agreement.

1. We certify that the New Highway as constructed, tested and commissioned has been the subject of a Stage 3 Road Safety Audit in accordance with Part 3 of Schedule 5, the Design Quality Management Plan to the Agreement and all other relevant provisions of the Agreement and that, except as expressly agreed in writing by the Province’s Representative (copies of which are attached hereto), all recommendations in the Audit Team’s report requiring implementation pursuant to the Agreement have been implemented.
2. The Audit Team’s report and statement certifying the audit has been carried out are attached.

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Audit Team (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Concessionaire's Representative
Name:
Date:

3. Receipt of this Certificate is acknowledged.

Signed:
Province's Representative
Name:
Date:

ANNEX 1(7) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF NO. []

CONCESSIONAIRE CHANGE CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Concessionaire’s Representative for recording a Concessionaire Change in accordance with Section 11.4 of the Agreement.

1. The following changes are recorded as a Concessionaire Change to which there has been no objection in accordance with the Review Procedure. The submission of the proposal for this Concessionaire Change is dated [] [and was returned marked [“received”] [“received with comments (the submission having been amended in accordance with such comments)”] on [date] [and the submission was not returned within 30 days of actual receipt by the Province’s Representative].

Signed:
Concessionaire’s Representative
Name:
Date:

2. Receipt of this Certificate is acknowledged.

Signed:
Province’s Representative
Name:
Date:

ANNEX 1(8) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF NO. []

PROVINCE CHANGE CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for recording a Province Change in accordance with Schedule 13 [Changes].

1. The following Province Change has been agreed or determined in accordance with Schedule 13 [Changes]: [.....].

Signed:

Concessionaire’s Representative

Name:

Date:

Signed:

Designer (Principal)

Name:

Title:

Date:

Professional Registration Number:.....

Affix Professional Seal

2. Countersignature by Province’s Representative:

Signed:

Province’s Representative

Name:

Date:

**ANNEX 1(9) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

ALTERNATIVE CONCEPT CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Concessionaire’s Representative for recording an Alternative Concept in accordance with Section 14.6 [Maintenance and Other Works] of the Agreement.

1 The following changes are recorded as an Alternative Concept to which there has been no objection in accordance with the Review Procedure. The submission of the proposal for this Alternative Concept is dated [.....] [and was returned marked [“received”] [“received with comments” (the submission having been amended in accordance with such comments] on [date] [and the submission was not returned within 30 days of actual receipt by the Province’s Representative].

Signed:
Concessionaire’s Representative
Name:
Date:

2. Receipt of this Certificate is acknowledged.

Signed:
Province’s Representative
Name:
Date:

ANNEX 1(10) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []

CONSTRUCTION CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer, Contractor and Concessionaire for certifying the construction of the Works or other works in accordance with paragraph 20 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure] to the Agreement.

Contractor’s and Concessionaire’s Statement

1. We certify that [.....] **[name and element of construction]** has been designed, constructed, [Substantially Completed] [Completed], commissioned and tested in all respects in accordance with the Design Data and Design Certificates, in each case to the extent applicable, to which there has been no objection (that has not been satisfactorily dealt with) under the Review Procedure and the provisions of the Agreement including all applicable Technical Requirements [as amended by the following Concessionaire Changes, Province Changes and Alternative Concepts: [.....]].

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Concessionaire’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 Works contained in the Design Quality Management Plan, the Construction Management Plan 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 Works or other works has been designed, constructed, [Substantially Completed] [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; (ii) the provisions of the Agreement including all applicable Technical Requirements [as amended by the Concessionaire Changes, Province Changes and Alternative Concepts 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:
Province's Representative
Name:
Date:

ANNEX 1(11) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []

CONCESSIONAIRE'S SUBSTANTIAL COMPLETION CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] ("the Agreement") relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Concessionaire in accordance with Part 3 of Schedule 5 [Design and Certification Procedure] to the Agreement when the Works have been Substantially Completed.

We certify that the Works were Substantially Completed in accordance with the Agreement on [date] and that the Concession Highway is suitable and safe for use by members of the public without traffic management restrictions.

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:.....

Affix Professional Seal

Signed:
Concessionaire's Representative
Name:
Date:

**ANNEX 1(12) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF NO. []**

SUBSTANTIAL COMPLETION CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Substantial Completion Certificate to be used by the Independent Certifier in accordance with Section 13.1 [Substantial Completion Certificate] of the Agreement.

1. Confirmation was given on [date] by the Concessionaire that the Works have been Substantially Completed in accordance with the Agreement and that the Concession Highway is suitable and safe for use by members of the public without traffic management restrictions.
2. A Road Safety Audit Certificate (Stage 3) for the New Highway was issued on [date].
3. A Concessionaire’s Substantial Completion Certificate for the Works was issued on [date].
4. This document shall serve as the Substantial Completion Certificate for the Works.

Signed:
Independent Certifier
Name:
Date:

**ANNEX 1(13) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

CONCESSIONAIRE'S COMPLETION CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] ("the Agreement") relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Concessionaire in accordance with Part 3 of Schedule 5 [Design and Certification Procedure] to the Agreement when the whole of the Works and the Decommissioning have been Completed.

We certify that the whole of the Works and the Decommissioning were Completed in accordance with the Agreement on [date].

Signed:
Designer (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Contractor (Principal)
Name:
Title:
Date:
Professional Registration Number:
Affix Professional Seal

Signed:
Concessionaire's Representative
Name:
Date:

**ANNEX 1(14) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

COMPLETION CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Completion Certificate to be used by the Independent Certifier in accordance with Section 13.2 [Completion Certificate] of the Agreement.

1. Confirmation was given on [date] by the Concessionaire that the whole of the Works and the Decommissioning have been Completed in accordance with the Agreement.
2. This document shall serve as the Completion Certificate for the Works and the Decommissioning.

Signed:
Independent Certifier
Name:
Date:

**ANNEX 1(15) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

RENEWAL CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] ("the Agreement") relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Renewal Certificate to be used by the Province's Representative in accordance with Section 19.7.14 of the Agreement.

1. Confirmation was given on [date] by the Concessionaire that all of the Renewal Works described in Schedule "A" annexed hereto have been Completed in accordance with the Agreement.
2. This document shall serve as the Renewal Certificate for the Renewal Works described in Schedule "A" annexed hereto.

Signed:
Province's Representative
Name:
Date.....

* Annex Schedule "A" describing relevant element of Renewal Works

**ANNEX 1(16) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

[NOT USED]

**ANNEX 1(17) TO PART 3 OF SCHEDULE 5
CERTIFICATE REF. NO. []**

END OF TERM CERTIFICATE

Agreement between Her Majesty the Queen in Right of the Province of British Columbia, BC Transportation Financing Authority and [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be issued by the Province’s Representative in accordance with Section 19.6 of the Agreement.

1. The Expiry Date for the Agreement was [].
2. A joint inspection of the Project Facilities was carried out on [] as required by Section 19.6 [End of Term Inspection] of the Agreement.
3. This Certificate shall serve as the End of Term Certificate as referred to in Section 19.6 of the Agreement.

Signed:
Province’s Representative
Name:
Date:

ANNEX 1(18) TO PART 3 OF SCHEDULE 5
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 [] dated [] (“the Agreement”) relating to the Okanagan Lake New Crossing Project. Expressions used in the Agreement have the same meanings in this Certificate.

Form of Certificate to be used by the Designer for certifying the assessment of Structures, in accordance with paragraph 43 of Section A of Part 3 of Schedule 5 [Design and Certification Procedure].

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 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 Technical Requirements, including Technical Appraisal Form No. [.....] dated [.....], as amended by the following:

[List, if any, the changes made by the issue of Change Certificates, Alternative Concept 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:

SCHEDULE

[Include here drawing numbers and title used for the assessment.]

Signed:
Designer (Principal)
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:
Title:
Date:

ANNEX 2(1) TO
PART 3 OF SCHEDULE 5

MODEL TECHNICAL APPRAISAL FORM (“TAF”)

Ref. No.....

1. NAME OF PROJECT.....

- 1.1 Classification of highway
- 1.2 Posted traffic speed (for a bridge give over and/or under).

2. NAME OF STRUCTURE.....

- 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 coatings.
- 3.9 Sidewalk width and location.
- 3.10 Bearing and joint type.

4. DESIGN/ASSESSMENT CRITERIA

- 4.1 Design Loads.
 - 4.1.1 Bridge design loadings including seismic, wind, wave, temperature, ship impact etc.
 - 4.1.2 Design Vehicle
 - 4.1.3 Pedestrian or pedestrian overpass live loading.
 - 4.1.4 Any special loading not covered above.
 - 4.1.5 MOT heavy or high load route requirements and arrangements being made to preserve the route.

- 4.1.6 Minimum clearances provided m, navigational clearances and navigation channel location.
- 4.1.7 Authorities consulted and any special conditions required.
- 4.2 List of relevant design documents.
- 4.3 Proposed Alternative Concepts.
- 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. GROUND CONDITIONS**
- 6.1 Acceptance of interpretative recommendations of the soils report to be used in the design and reasons for any proposed departures.
- 6.2 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.
- 6.3 Differential settlement to be allowed for in design of structure.
- 6.4 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.
- 6.5 Results of tests of ground water (e.g. pH value, chloride or sulphate content) and any counteracting measures proposed.
- 6.6 Anticipated ground movements or settlement due to seismic loading, measures proposed to deal with these impacts as far as they affect the structure.
- 7. CHECKING**
- 7.1 Proposed Category of structure.

7.2 Name of proposed Reviewer.

7.3 Temporary Works for which the Concessionaire will be required to arrange an independent check listing the parts of the structure affected.

8. DRAWINGS AND DOCUMENTS

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

8.1.1 a location plan;

8.1.2 a preliminary general arrangement drawing; and

8.1.3 relevant parts of the ground investigation report.

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

Signed:

Principal, Designer/Contractor* (Principal)

Name:

Engineering Qualifications:

Date:

Professional Registration Number:.....

Affix Professional Seal

Signed:

Concessionaire’s Representative

Name:

Date:

Note: ⁺ The Contractor may sign only in respect of Temporary Works.

10. 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:

ANNEX 3 TO
 PART 3 OF SCHEDULE 5

REVIEW TIMES FOR TECHNICAL APPRAISAL FORMS

(NO ALTERNATIVE CONCEPTS)

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM				RE-SUBMISSION OF TECHNICAL APPRAISAL FORM			
	Cat 0	Cat 1	Cat 2	Cat 3	Cat 0	Cat 1	Cat 2	Cat 3
Structures other than Structures constituting Temporary Off-Site Facilities	N/A	20	20	25	N/A	20	20	25
Structures constituting Temporary Off-Site Facilities	N/A	20	20	25	N/A	20	20	25

Notes:

- (a) This Annex 3 applies only to those TAFs that do not include any Alternative Concepts.
- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8 [Review Procedure].
- (c) The review time commences when the Province's Representative actually receives the completed TAF.

- (d) All review times are quoted in Working Days.
- (e) Where the number of Technical Appraisal Forms submitted or resubmitted in any two week period exceeds 12, the review time for each of the forms submitted during that period shall be determined as follows: (review time from the above Table) x (Number of Forms Submitted/12).
- (f) To aid the review process it is suggested that the Concessionaire informally discusses proposed submissions with the Province's Representative prior to making a formal submission.

ANNEX 4 TO
 PART 3 OF SCHEDULE 5

REVIEW TIMES FOR TECHNICAL APPRAISAL FORMS

(ALTERNATIVE CONCEPTS INCLUDED)

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM				RE-SUBMISSION OF TECHNICAL APPRAISAL FORM			
	Cat 0	Cat 1	Cat 2	Cat 3	Cat 0	Cat 1	Cat 2	Cat 3
Structures other than Structures constituting Temporary Off-Site Facilities	N/A	20	20	30	N/A	20	20	30
Structures constituting Temporary Off-Site Facilities	N/A	20	20	30	N/A	20	20	30

Notes:

- (a) This Annex 4 applies only to those TAFs that include an Alternative Concept.
- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8 [Review Procedure].
- (c) The review time commences when the Province's Representative actually receives the completed TAF.
- (d) All review times are quoted in Working Days.

- (e) Where the number of Technical Appraisal Forms submitted or resubmitted in any two week period exceeds 12, the review time for each of the forms submitted during that period shall be determined as follows: (review time from the above Table) x (Number of Forms Submitted/12).
- (f) To aid the review process it is suggested that the Concessionaire informally discusses proposed submissions with the Province's Representative prior to making a formal submission.

Review Times for Technical Appraisal Forms (Temporary Works)

ANNEX 5 TO PART 3 OF SCHEDULE 5

**REVIEW TIMES FOR TECHNICAL APPRAISAL FORMS
(TEMPORARY WORKS)**

NO ALTERNATIVE CONCEPTS

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM	RE-SUBMISSION OF TECHNICAL APPRAISAL FORM
Structures other than Structures constituting Temporary Off-Site Facilities	20	20

ALTERNATIVE CONCEPTS

STRUCTURE GROUP	FIRST SUBMISSION OF TECHNICAL APPRAISAL FORM	RE-SUBMISSION OF TECHNICAL APPRAISAL FORM
Structures other than Structures constituting Temporary Off-Site Facilities	25	25

Notes:

- (a) This Annex 5 applies only to TAFs in respect of Temporary Works.

Review Times for Technical Appraisal Forms (Temporary Works)

- (b) The above times are in place of those given in paragraph 1.3 of Part 2 of Schedule 8 [Review Procedure].
- (c) The review time commences when the Province's Representative actually receives the completed TAF.
- (d) All review times are quoted in Working Days.
- (e) Where the number of Technical Appraisal Forms submitted or resubmitted in any two week period exceeds 12, the review time for each of the forms submitted during that period shall be determined as follows: (review time from the above Table) x $\frac{\text{Number of Forms Submitted}}{12}$.
- (f) To aid the review process it is suggested that the Concessionaire informally discusses proposed submissions with the Province's Representative prior to making a formal submission.